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Industry Wage Survey: Machinery Manufacturing November 1983

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Industry Wage Survey: Machinery Manufacturing November 1983

U.S. Department of Labor
William E. Brock, Secretary

Bureau of Labor Statistics
Janet L. Norwood, Commissioner
April 1985

Bulletin 2229

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Preface

This bulletin summarizes the results of a Bureau of Labor Statistics survey of wages and employee benefits in the nonelectrical machinery manufacturing industries in November 1983. Data on occupational earnings, establishment practices, and employee benefits are presented by area for all machinery industries combined. Information on occupational pay also is presented for selected machinery industries in six areas.

Separate releases were issued during the spring of 1984 for each of the 23 metropolitan areas covered by the survey. Copies are available from the Bureau of Labor Statistics, Washington, D.C., 20212, or any of its regional offices.

The study was conducted in the Bureau's Office of Wages and Industrial Relations. Jonathan W. Kelinson of the Division of Occupational Pay and Employee Benefit Levels analyzed the survey data and prepared this bulletin. Maggie L. Williams prepared many of the tabulations and provided statistical assistance. Fieldwork for the survey was directed by the Bureau's Assistant Regional Commissioners for Operations.

Other reports currently available from the Bureau's industry wage survey program, as well as the addresses of the Bureau's regional offices, are listed at the end of this bulletin.

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Machinery Manufacturing, November 1983

Earnings and benefits

Occupational earnings in nonelectrical machinery manufacturing industries varied considerably among the 23 areas surveyed in November 1983.[1] This was due, in part, to the diversity of skills required to manufacture the wide variety of products of these industries, ranging from hedge trimmers and meat grinders to large, complex engines, turbines, construction equipment, and oil drilling rigs. Occupations selected to represent production workers in these industries accounted for one-half of the 252,900 production and related workers covered by the study (table 1).[2]

Among the jobs surveyed, tool and die makers usually had the highest hourly earnings. Average pay ranged from $10.40 an hour in Atlanta to $14.38 in Los Angeles—Long Beach, but typically was between $11 and $13 an hour. In 6 of the 11 areas that could be compared, workers producing tools and dies for internal use (those employed in other than jobbing shops) averaged more than workers producing tools and dies for sale (those employed in jobbing shops). The differential was generally 5 percent or less.

Machine-tool operators on production work were the largest occupational group studied. They performed their work on conventional equipment or numerically controlled (N/C) machines, which use coded instructions that direct the machine through a sequence of operations. Conventional operators were classified into three groups for wage study purposes. Operators who set up their own machines and perform a variety of operations to close tolerances (class A) averaged from $8.39 per hour in Atlanta to $13.24 in San Francisco—Oakland. Nearly one-half of the machine-tool operators studied were classified in this category. The corresponding range for the intermediate group of operators (class B) was from $7.31 in Atlanta to $11.37 in Milwaukee; and for operators who do routine and repetitive work but do not set up machines (class C), the averages ranged from $5.31 in Newark to $10.22 in Milwaukee.

Average pay for operators of N/C machines who set up work and operate machines ranged from $7.13 in Atlanta to $14.72 in Los Angeles—Long Beach. For operators of N/C machines set up by others, the spread in average pay was from approximately $7 to $11 per hour, among the seven areas where data could be shown. In 9 of 20 areas for which comparisons could be made, N/C operators who do setup work averaged more per hour than class A conventional machine-tool operators. In another eight areas, earnings of these N/C operators fell between the pay levels for class A and class B conventional operators.

In plants with N/C machines, formal policies regarding wages for operators of these machine tools varied widely (table 41). About 173,400 production workers were in plants with N/C machines. Almost one-half of these workers were employed in factories that did not establish a formal rate relationship between operators of N/C equipment and conventional machine tools; three-tenths worked in plants which set the same wage rates for both types of operators; and nearly one-fifth worked in plants which set higher rates for N/C than for conventional operators. A few establishments set N/C rates lower than conventional rates or had other wage-setting policies.

Average pay for machine-tool operators in the toolroom ranged from $7.86 an hour in New York to $14.06 in San Francisco—Oakland, but typically ranged between $10 and $12.50. Toolroom work generally involves planning and performing difficult machining operations which require complicated setups or a high degree of accuracy. In 11 of the 19 areas compared, machine-tool operators in the toolroom averaged more per hour than class A production machine-tool operators.

Assemblers, the second largest employee group, usually accounted for between one-tenth and one-fourth of the production work force in an area. Average earnings for work requiring fitting of parts and decisions regarding proper performance of parts or units (class A) typically ranged between $9 and $11 an hour. Workers assembling in accordance with standard and prescribed procedures (class B) typically averaged between $7 and $9, while those performing short-cycle, repetitive assembling operations (class C) generally averaged between $6 and $8.

[1] Earnings data presented in this bulletin exclude premium pay for overtime, and for work on weekends, holidays, and late shifts. See appendix C for descriptions of jobs surveyed.

[2] See appendix B for scope and method of survey.

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Janitors, among the lowest paid occupations in the survey, averaged between $5.57 in New York and $10.08 in Detroit. They averaged less than $8 in 15 of the 22 areas compared.

Occupational averages were typically highest in Detroit and San Francisco—Oakland and lowest in Atlanta. The difference between the highest and lowest paying areas typically fell between 50 and 70 percent. The interarea spread in average hourly earnings varied by occupation. For example, tool and die makers (other than jobbing) in Chicago averaged 16 percent more than their counterparts in Houston. The corresponding spread for machine-tool operators in the toolroom was 6 percent. However, class B assemblers in Houston averaged 21 percent more than their counterparts in Chicago in a reversal of the regional trend noted earlier.

Virtually all establishments studied provided paid holidays and paid vacations to production workers. Most workers had provisions for 9 to 12 holidays per year (table 37). Typical vacation provisions were 1 or 2 weeks of vacation pay after 1 year of service, 2 or 3 weeks after 5 years, 3 weeks after 10 years, and 4 weeks or more after 20 years of service (table 38).

Establishments providing life, hospitalization, surgical, and basic medical insurance employed virtually all production workers in most areas (table 39). A large majority of workers were also covered by major medical, accidental death and dismemberment, and sickness and accident insurance. Employers typically paid the entire cost of these health and insurance plans. Retirement pension plans, generally financed wholly by employers, were available to four-fifths or more of the plant workers in 16 areas, and to between one-half and three-fourths in the remaining 7 areas.

Employer provisions for certain benefits varied widely by area (table 40). For example, paid leave to attend funerals of specified family members applied to all or virtually all workers in Minneapolis, Pittsburgh, and Worcester, but to only one-fourth in Portland (Oreg.). At least two-thirds of the workers in each of the remaining areas had formal provisions for funeral leave. Formal pay provisions for time off to serve as a juror applied to about one-third of the workers in Los Angeles—Long Beach, and to at least two-thirds of the workers in the remaining areas.

Payments to workers who lose their job due to technological changes or plant closings (technological severance pay) were available to between one-tenth and one-half of the workers in most of the areas. Supplemental unemployment benefit plans, reported in 14 areas, usually were available to between one-tenth and one-fourth of the workers.

Formal provisions for periodic wage rate changes applied to between about one-fifth and one-half of the workers in most areas. These wage adjustments were usually tied to the BLS Consumer Price Index.

Trends in earnings

Between January 1981 and November 1983, average straight-time hourly earnings in selected machinery manufacturing occupations in 21 areas[3] increased 14.8 percent, an average (compound) annual gain of 5.0 percent.[4] (In contrast, between January 1978 and January 1981, the average annual increase was 10.2 percent.) In the most recent period, the annual rate of increase among the 21 areas ranged from 2.0 percent in Newark to 7.0 percent in Los Angeles and 8.1 percent in Dallas—Fort Worth. Of the remaining areas, slightly more than one-half reported annual gains between 5.2 and 6.4 percent, while the remaining areas posted annual increases of 2.7 to 4.7 percent.

For all 21 areas combined, material handling laborers' earnings increased 6.0 percent annually from January 1981 to November 1983. Tool and die makers (working in other than jobbing shops) received increases at a 5.4-percent annual rate. The wage and salary component of the Bureau's Employment Cost Index for durable goods manufacturing increased 6.2 percent annually between December 1980 and December 1983.

Industry characteristics

The 23-area survey covered one-fifth of the 1.3 million production and related workers employed in machinery manufacturing industries nationwide. Production worker employment was highest in the Chicago metropolitan area (33,641). Other large machinery manufacturing centers included Detroit (20,732 production workers), Los Angeles—Long Beach (25,407), and Minneapolis—St. Paul (19,721). The smallest centers studied (with fewer than 3,000 production workers each) were Atlanta (2,827), Portland (1,730), and Worcester (2,474). (See appendix table B-1).

Between January 1981 and November 1983, aggregate employment of production workers in the 23 areas decreased from 393,000 to 252,900—down 36 percent. Proportionally, the declines were largest (50 to 59 percent) in Cleveland, Houston, Milwaukee, Pittsburgh, and Portland, and ranged from 20 to 40 percent in 15 other areas. The only area reporting increased employment was Atlanta—up 19 percent.

The types of products manufactured varied considerably among the 23 areas in the November 1983 study. For example, plants producing construction and related equipment (principally oil field machinery) employed approximately one-half of the production workers in Dallas—Fort Worth and Tulsa, and four-fifths in Houston. Three-fifths of the workers in Worcester, just over half in Detroit, two-fifths in

[3] Earnings trend data in this report are limited to the 21 areas surveyed since 1955. Tulsa was first studied in the winter of 1970-71 and Atlanta in 1973.

[4] See appendix A for a listing of the occupations included in the calculations.

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Chicago, and between one-fourth and one-third of the production work force in Baltimore, Buffalo, Cleveland, Hartford, Newark, Pittsburgh, and St. Louis were in establishments primarily manufacturing metalworking machinery. Manufacturers primarily building electronic computing equipment employed seven-tenths of the production workers in Denver—Boulder, and between one-third and two-fifths in four other areas: Boston, Los Angeles—Long Beach, Minneapolis—St. Paul, and San Francisco—Oakland.

In the 23 areas studied, establishments employing one-third of the production workers used a multiple operation system commonly referred to as "bank operations". This system enables one worker to operate two or more production machine tools of the same type simultaneously. Four-fifths of the workers assigned to bank operations received a wage differential for such work (table 41).

In November 1983, three-tenths of the workers in the 23 areas were employed in establishments with no numerically controlled machines and no plans for their purchase. The proportion of workers in plants with such machines ranged from one-third in Boston and Buffalo to nine-tenths in Houston, but typically fell between three-fifths and four-fifths.

Almost seven-eighths of the production workers were employed in establishments having assembly work. Plants primarily using floor assembly or bench assembly systems each employed just over one-third of the workers; one-tenth were in plants using conveyor lines. Types of assembly systems varied among areas because of the wide variety of machinery products manufactured. The proportion of workers in plants chiefly using floor assembly, for example, ranged from 15 percent in Denver—Boulder to 71 percent in Portland (table 41).

One-third of the workers were in plants that had some kind of formal apprenticeship or training program, or both (table 41). The proportion of workers in plants having such programs ranged from 2 percent in New York and 3 percent in Minneapolis—St. Paul to 66 percent each in Milwaukee and St. Louis. Most commonly, the range fell between 30 and 60 percent.

Work schedules of 40 hours a week were in effect in establishments employing four-fifths or more of the plant workers in 19 areas (table 34). Most of the remaining workers—principally in Chicago and Detroit—had schedules exceeding 40 hours per week. Exceptions included Baltimore, where one-fourth of the workers had 37.5-hour weekly schedules, and New York, Philadelphia, and Tulsa, where approximately one-tenth had schedules of fewer than 40 hours.

Between January 1981 and November 1983, the proportions of plant workers on schedules exceeding 40 hours decreased in 15 areas, increased in 6 areas, and remained the same in 2 areas.

Provisions for late-shift operations and extra pay above day-shift rates for such work are widespread in machinery manufacturing (table 35). The proportion of workers actually employed on second shifts at the time of the survey ranged from 5.2 percent in New York to 17.0 percent in Minneapolis—St. Paul (table 36). Third-shift employment ranged from 1 percent or less in nine of the areas up to about 5 percent in Chicago and Pittsburgh. Shift differentials, usually paid on a cents-per-hour basis or as a percentage of day-shift rates, varied widely, but usually amounted to at least 25 cents, or 10 to 15 percent.

Except in Milwaukee, nearly nine-tenths or more of the production workers were paid on a time-rated basis, usually under formal plans that provided a range of rates for specific occupations (table 33). In most areas, progression within individual ranges usually was based on length of service or a combination of length of service and merit review. Incentive plans applied to two-fifths of the workers in Milwaukee, and to at least one-tenth in only Baltimore, Boston, Chicago, and Hartford.

Establishments with collective bargaining agreements covering a majority of production workers employed one-half of the production work force. Most of the contracts were with the International Association of Machinists (IAM), the United Auto Workers (UAW), or the United Steelworkers of America (USA). At least two-thirds of the production workers in Buffalo, Cleveland, Milwaukee, New York, San Francisco—Oakland, and St. Louis were covered by union contracts (table 41). Less than one-fifth of the workers in Denver—Boulder and Worcester were under union agreements.

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Table 1. Occupational average earnings: All machinery industries

(Number and average straight-time hourly earnings[1] of production workers in machinery manufacturing establishments, 23 selected areas,[2] November 1983)

Occupation	Northeast															
	Boston		Buffalo		Hartford-New Britain-Bristol		Newark		New York		Philadelphia		Pittsburgh		Worcester	
	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings
Machine-tool operators, production, class A	764	$10.99	460	$10.06	473	$9.18	490	$9.83	323	$10.22	918	$9.79	436	$10.53	273	$9.62
Automatic-lathe operators	–	–	–	–	–	–	23	10.23	–	–	67	9.09	–	–	–	–
Drill-press operators, radial	42	11.16	34	9.69	10	9.89	21	9.69	–	–	52	10.16	21	10.56	–	–
Drill-press operators, single- or multiple-spindle	–	–	22	8.92	–	–	–	–	–	–	–	–	–	–	–	–
Engine-lathe operators	–	–	24	9.53	32	9.35	82	10.30	32	10.26	112	9.91	65	10.64	24	9.81
Grinding-machine operators	110	11.51	103	9.74	142	9.53	165	9.96	41	8.71	146	9.63	24	11.57	67	9.69
Machine-tool operators, miscellaneous	–	–	145	10.49	163	8.75	127	9.24	156	11.13	274	9.97	202	10.[illegible]	70	9.92
Milling-machine operators	8[illegible]	11.43	58	10.35	68	9.35	16	10.00	55	9.24	163	9.92	38	10.86	–	–
Screw-machine operators, automatic	–	–	–	–	–	–	27	10.38	–	–	–	–	–	–	–	–
Turret-lathe operators, hand	30	10.86	59	10.14	23	9.31	–	–	–	–	–	–	56	9.72	–	–
Machine-tool operators, production, class B	23[illegible]	10.16	109	8.15	527	9.04	269	9.38	261	7.54	469	3.11	176	8.89	174	8.14
Drill-press operators, radial	–	–	–	–	10	8.16	–	–	–	–	–	–	–	–	19	9.24
Drill-press operators, single- or multiple-spindle	1[illegible]	8.62	–	–	13	9.06	–	–	38	6.12	21	7.07	–	–	–	–
Engine-lathe operators	–	–	–	–	28	8.49	16	8.84	38	7.98	–	–	–	–	–	–
Grinding-machine operators	[illegible]	8.76	14	8.92	183	8.47	38	8.52	–	–	–	–	–	–	41	8.55
Machine-tool operators, miscellaneous	–	–	66	8.24	182	10.06	112	10.05	46	7.83	103	6.82	76	8.87	52	8.33
Milling-machine operators	–	–	–	–	51	8.12	39	8.71	24	8.44	–	–	–	–	21	7.76
Turret-lathe operators, hand	–	–	–	–	–	–	–	–	23	7.56	–	–	–	–	–	–
Machine-tool operators, production, class C	–	–	94	7.29	350	9.20	76	5.31	245	5.81	70	6.82	132	7.48	–	–
Drill-press operators, single- or multiple-spindle	–	–	–	–	21	8.06	–	–	–	–	–	–	–	–	–	–
Grinding-machine operators	–	–	–	–	34	5.86	–	–	45	6.54	18	7.24	–	–	–	–
Machine-tool operators, miscellaneous	–	–	69	7.25	–	–	–	–	–	–	–	–	–	–	–	–
Machine-tool operators, production, numerically controlled, set up and operate	167	9.99	82	11.24	108	8.87	109	10.54	49	10.15	588	10.18	41	11.46	95	9.64
Automatic-lathe operators	48	11.05	–	–	43	8.67	26	10.30	–	–	–	–	–	–	–	–
Drill-press operators, single- or multiple-spindle	–	–	–	–	–	–	–	–	–	–	–	–	–	–	8	9.35
Engine-lathe operators	–	–	–	–	–	–	–	–	–	–	–	–	–	–	19	9.05
Machine-tool operators, miscellaneous	69	10.42	56	11.43	24	8.98	54	10.68	–	–	328	9.75	19	11.65	23	10.09
Milling-machine operators	–	–	–	–	27	8.98	11	11.65	–	–	78	10.16	–	–	–	–
Machine-tool operators, production, numerically controlled, operate only	–	–	–	–	18	7.04	16	9.26	–	–	–	–	–	–	–	–

See footnotes at end of table.

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Table 1. Occupational average earnings: All machinery industries—Continued

(Number and average straight-time hourly earnings[1] of production workers in machinery manufacturing establishments, 23 selected areas,[2] November 1983)

Occupation	Northeast															
	Boston		Buffalo		Hartford–New Britain–Bristol		Newark		New York		Philadelphia		Pittsburgh		Worcester	
	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings
Machine-tool operators, toolroom	–	–	73	$10.70	302	$9.61	125	$10.09	39	$7.86	191	$11.11	360	$10.17	67	$8.94
One type of machine	–	–	64	10.92	206	9.84	77	10.45	39	7.86	–	–	–	–	–	–
Drill-press operators, radial	–	–	–	–	–	–	13	10.47	–	–	–	–	–	–	–	–
Engine-lathe operators	–	–	–	–	36	9.73	15	10.90	–	–	–	–	–	–	–	–
Grinding-machine operators	–	–	40	10.78	62	10.71	35	10.35	8	8.71	–	–	39	10.13	8	9.13
Milling-machine operators	–	–	–	–	46	8.94	–	–	–	–	–	–	–	–	–	–
More than one type of machine	–	–	–	–	96	9.10	48	9.50	–	–	160	11.21	294	10.24	39	9.15
Assemblers	1,430	$7.61	494	10.49	751	9.15	963	7.84	1,359	6.98	3,204	7.80	791	8.67	219	9.24
Class A	462	9.14	296	10.36	298	9.19	165	9.47	378	9.04	841	9.78	367	9.74	143	9.84
Class B	388	7.24	114	10.27	210	8.26	368	8.04	766	6.31	1,397	7.71	235	7.63	–	–
Class C	580	6.64	–	–	243	9.87	430	7.05	215	5.75	966	6.22	–	–	41	7.75
Carpenters, maintenance	–	–	–	–	7	10.62	–	–	–	–	10	9.59	7	11.06	–	–
Electricians, maintenance	–	–	39	10.29	91	12.26	76	11.11	–	–	89	10.87	86	11.09	–	–
Inspectors	574	8.71	111	10.44	326	9.31	266	8.44	250	8.18	606	8.79	224	10.03	111	8.60
Class A	211	10.01	71	10.95	137	9.60	82	9.60	81	9.35	268	10.28	77	11.22	49	9.78
Class B	224	8.53	38	9.54	84	8.24	139	8.27	49	9.63	205	8.19	77	10.50	50	8.07
Class C	139	7.02	–	–	105	9.78	45	6.81	–	–	–	–	–	–	–	–
Janitors, porters, and cleaners	209	7.20	42	7.90	108	8.13	57	7.05	73	5.57	180	7.06	53	8.84	25	7.79
Laborers, material handling	35	6.54	88	8.66	130	7.60	122	6.36	88	6.53	87	8.06	46	9.68	–	–
Machinists, maintenance	–	–	13	8.65	187	12.06	–	–	–	–	32	9.94	–	–	–	–
Machinists, production	–	–	67	10.34	53	9.19	145	10.58	258	9.22	193	9.30	151	11.65	–	–
Mechanics, maintenance	–	–	72	10.75	–	–	–	–	–	–	168	10.70	79	10.47	64	10.64
Polishers and buffers, metal	–	–	–	–	16	7.97	27	10.08	–	–	–	–	–	–	7	8.13
Polishing- and buffing-machine operators	–	–	–	–	26	8.31	–	–	–	–	–	–	–	–	–	–
Punch-press operators	27	8.86	28	6.55	–	–	88	8.36	208	5.22	–	–	23	11.05	–	–
Class A	12	10.62	–	–	–	–	–	–	–	–	–	–	23	11.05	–	–
Class B	–	–	22	6.30	–	–	–	–	202	5.17	–	–	–	–	–	–
Setup workers, machine tools	31	8.76	–	–	367	10.33	–	–	–	–	–	–	–	–	–	–
Conventional machines	–	–	–	–	367	10.33	–	–	–	–	–	–	–	–	–	–
Tool and die makers	106	11.32	146	10.54	386	11.31	534	11.77	194	11.14	852	11.73	115	11.28	39	10.81
Jobbing	42	11.10	102	10.56	233	10.74	416	11.86	107	11.17	789	11.76	–	–	–	–
Other than jobbing	64	11.46	44	10.48	153	12.18	–	–	87	11.11	83	11.50	59	11.21	32	10.73
Tool clerks	55	9.26	22	8.36	56	9.39	31	9.09	28	6.59	90	8.27	45	10.08	7	7.86
Welders, hand	159	10.25	201	10.69	108	9.46	292	10.15	18	10.22	274	9.47	156	11.15	40	9.26
Class A	125	10.55	141	10.83	81	9.97	155	10.52	18	10.22	200	10.50	121	11.36	36	9.33
Class B	34	9.12	60	10.35	27	7.93	137	9.73	–	–	–	–	35	10.41	–	–
Welders, machine	–	–	29	10.29	21	8.61	37	8.32	148	6.87	–	–	–	–	–	–
Class A	–	–	–	–	–	–	–	–	88	7.32	–	–	15	10.51	–	–
Class B	–	–	–	–	–	–	–	–	60	8.22	–	–	–	–	–	–

See footnotes at end of table.

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Table 1. Occupational average earnings: All machinery industries—Continued

(Number and average straight-time hourly earnings[1] of production workers in machinery manufacturing establishments, 23 selected areas,[2] November 1983)

Occupation	South										North Central					
	Atlanta		Baltimore		Dallas-Fort Worth		Houston		Tulsa		Chicago		Cleveland		Detroit	
	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings
Machine-tool operators, production, class A	75	$8.39	408	$10.65	895	$10.62	711	$11.56	420	$10.80	2,181	$11.50	937	$10.15	2,410	$12.70
Automatic-lathe operators	–	–	–	–	45	9.85	42	11.59	–	–	121	12.36	41	10.46	141	12.22
Drill-press operators, radial	–	–	–	–	26	9.09	45	10.34	39	8.58	164	11.15	21	11.07	–	–
Drill-press operators, single- or multiple-spindle	–	–	–	–	11	10.27	–	–	22	9.47	96	11.38	49	9.78	–	–
Engine-lathe operators	–	–	53	10.22	106	10.71	170	11.71	26	11.32	121	10.13	66	9.74	159	13.50
Grinding-machine operators	–	–	41	11.10	62	10.85	48	12.20	44	10.30	401	11.86	446	9.98	1,123	12.65
Machine-tool operators, miscellaneous	–	–	163	9.81	356	10.58	187	11.81	201	11.21	515	11.13	68	11.75	450	13.36
Milling-machine operators	15	8.86	–	–	66	11.05	67	11.71	–	–	433	11.74	96	9.94	414	12.01
Screw-machine operators, automatic	–	–	–	–	–	–	–	–	–	–	177	11.76	34	10.58	–	–
Turret-lathe operators, hand	–	–	–	–	151	10.69	129	10.92	29	11.76	153	11.64	116	10.03	79	12.79
Machine-tool operators, production, class B	76	7.31	159	9.61	603	8.18	808	9.71	91	8.32	719	9.28	473	8.92	879	10.92
Automatic-lathe operators	–	–	–	–	–	–	–	–	–	–	40	11.07	–	–	24	11.24
Drill-press operators, radial	–	–	–	–	–	–	–	–	–	–	35	11.38	26	8.85	–	–
Drill-press operators, single- or multiple-spindle	–	–	–	–	71	7.00	–	–	–	–	69	10.47	39	8.91	–	–
Engine-lathe operators	12	6.96	–	–	13	9.36	71	10.39	–	–	10	11.77	28	9.11	35	9.51
Grinding-machine operators	–	–	–	–	53	6.62	–	–	16	6.90	116	10.15	161	9.40	228	10.76
Machine-tool operators, miscellaneous	–	–	–	–	366	6.57	–	–	–	–	290	7.71	10	10.48	–	–
Milling-machine operators	8	6.27	–	–	37	8.20	137	9.48	–	–	74	9.19	129	8.77	78	10.11
Screw-machine operators, automatic	–	–	–	–	–	–	–	–	–	–	16	10.96	–	–	–	–
Turret-lathe operators, hand	–	–	–	–	18	8.16	87	10.59	–	–	–	–	32	8.88	–	–
Machine-tool operators, production, class C	30	6.71	116	7.83	263	7.60	115	9.68	21	7.21	519	8.39	360	7.10	–	–
Automatic-lathe operators	–	–	–	–	–	–	–	–	–	–	29	9.62	–	–	–	–
Drill-press operators, single- or multiple-spindle	–	–	–	–	–	–	–	–	–	–	56	9.66	–	–	–	–
Grinding-machine operators	–	–	–	–	–	–	–	–	–	–	44	8.85	135	7.38	–	–
Machine-tool operators, miscellaneous	6	6.51	–	–	186	8.10	–	–	21	7.21	265	7.19	–	–	–	–
Milling-machine operators	–	–	–	–	–	–	24	9.69	–	–	62	10.05	26	8.24	26	9.58
Turret-lathe operators, hand	–	–	–	–	9	6.97	–	–	–	–	41	9.40	–	–	–	–
Machine-tool operators, production, numerically controlled, set up and operate	11	7.13	–	–	481	10.44	577	11.86	234	9.87	894	11.03	343	10.40	387	11.61
Automatic-lathe operators	–	–	–	–	195	10.04	–	–	–	–	208	11.19	127	9.14	97	11.20
Drill-press operators, radial	–	–	–	–	–	–	–	–	6	10.50	–	–	–	–	–	–
Drill-press operators, single- or multiple-spindle	–	–	–	–	–	–	–	–	–	–	–	–	–	–	16	12.03
Engine-lathe operators	–	–	–	–	–	–	139	12.41	–	–	–	–	–	–	51	11.53

See footnotes at end of table.

Table 1. Occupational average earnings: All machinery industries—Continued

(Number and average straight-time hourly earnings[1] of production workers in machinery manufacturing establishments, 23 selected areas,[2] November 1983)

Occupation	South										North Central					
	Atlanta		Baltimore		Dallas–Fort Worth		Houston		Tulsa		Chicago		Cleveland		Detroit	
	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings
Machine-tool operators, miscellaneous	–	–	–	–	85	$10.75	45	$11.75	–	–	112	$9.41	36	$12.53	–	–
Milling-machine operators	–	–	13	$10.25	94	10.72	124	11.25	–	–	189	10.95	106	10.12	119	$11.77
Turret-lathe operators, hand	–	–	–	–	–	–	143	11.59	59	$9.93	15	13.06	26	11.67	–	–
Machine-tool operators, production, numerically controlled, operate only	–	–	11	9.00	–	–	188	6.98	14	7.56	–	–	–	–	29	8.54
Machine-tool operators, toolroom	–	–	54	9.33	130	11.42	88	12.18	42	10.90	2,171	12.95	354	10.54	1,179	12.42
One type of machine	–	–	–	–	94	11.25	40	11.55	30	10.93	1,364	12.63	256	10.67	909	12.39
Drill-press operators, radial	–	–	–	–	–	–	–	–	–	–	–	–	11	9.72	47	12.73
Engine-lathe operators	–	–	–	–	–	–	–	–	–	–	114	11.42	16	10.74	91	11.60
Grinding-machine operators	–	–	–	–	44	10.43	40	11.55	22	11.41	485	13.54	115	10.44	306	11.95
Milling-machine operators	–	–	–	–	–	–	–	–	–	–	483	12.02	56	10.68	233	12.42
More than one type of machine	–	–	52	9.23	–	–	–	–	–	–	807	13.49	98	10.19	270	12.54
Assemblers	706	$6.58	539	7.67	2,503	8.47	868	10.68	301	9.13	4,035	8.50	1,414	8.55	2,443	11.30
Class A	41	7.87	121	11.00	1,194	9.84	483	10.89	173	10.04	1,417	11.01	602	11.02	776	12.47
Class B	407	6.78	318	7.10	862	7.48	343	10.77	81	8.62	1,091	8.93	544	7.43	1,400	11.23
Class C	258	6.06	–	–	447	6.71	–	–	–	–	1,527	5.87	–	–	–	–
Carpenters, maintenance	–	–	–	–	–	–	–	–	–	–	31	11.16	–	–	–	–
Electricians, maintenance	6	9.15	9	12.07	112	9.98	162	11.76	14	11.39	238	12.76	76	12.34	190	12.99
Inspectors	63	6.85	138	9.57	509	9.82	647	11.31	148	9.73	872	10.57	544	9.86	603	11.93
Class A	12	7.05	73	11.45	343	10.45	500	11.57	115	10.29	418	11.54	221	10.99	348	12.33
Class B	28	7.45	46	8.04	121	8.58	123	11.22	23	8.43	302	10.11	183	9.09	90	10.75
Class C	23	6.01	19	6.03	–	–	–	–	–	–	152	8.83	140	9.07	–	–
Janitors, porters, and cleaners	30	5.78	38	6.15	197	6.59	119	7.68	51	7.27	403	7.86	134	8.15	312	10.08
Laborers, material handling	26	6.76	30	5.96	75	8.13	129	9.15	–	–	129	8.35	127	8.90	208	10.50
Machinists, maintenance	–	–	13	12.12	25	9.69	43	12.49	–	–	279	11.07	36	11.95	–	–
Machinists, production	10	9.73	–	–	196	10.68	1,249	11.59	11	11.00	327	11.34	29	10.54	215	13.08
Mechanics, maintenance	24	8.45	28	10.74	160	10.11	260	12.20	41	11.50	293	12.35	86	11.55	206	13.67
Polishers and buffers, metal	–	–	–	–	36	7.34	–	–	–	–	184	11.03	–	–	–	–
Polishing- and buffing-machine operators	7	6.61	–	–	24	7.86	–	–	–	–	120	10.62	20	9.45	–	–
Punch-press operators	74	7.45	13	7.39	–	–	–	–	8	9.89	598	6.53	167	7.59	–	–
Class A	39	7.72	–	–	84	9.39	19	9.06	8	9.89	–	–	101	8.12	–	–
Class B	35	7.14	–	–	–	–	–	–	–	–	461	6.22	66	6.78	–	–
Setup workers, machine tools	38	8.44	–	–	–	–	–	–	18	10.75	146	11.25	–	–	–	–
Conventional machines	32	8.53	–	–	–	–	–	–	–	–	144	11.21	–	–	–	–
Tool and die makers	40	10.40	115	10.58	97	11.26	212	12.02	50	12.08	1,760	13.90	488	11.09	1,311	13.03
Jobbing	–	–	84	9.52	–	–	–	–	–	–	1,448	13.89	413	11.04	1,166	12.94
Other than jobbing	34	10.38	–	–	91	11.33	172	12.02	46	12.22	312	13.95	75	11.37	145	13.71
Tool clerks	10	5.62	–	–	58	8.88	92	9.20	29	8.60	190	10.15	67	10.13	92	11.59
Welders, hand	181	6.87	115	9.57	269	9.55	915	10.25	261	9.09	745	9.91	673	10.23	375	11.53
Class A	30	8.93	97	9.84	178	9.80	738	10.56	157	9.95	570	10.73	571	10.61	259	11.41
Class B	151	6.46	18	8.08	91	9.07	177	9.00	104	7.78	175	7.24	102	8.09	–	–
Welders, machine	55	6.21	–	–	318	7.71	125	11.08	146	10.25	250	8.78	–	–	54	10.74
Class A	–	–	–	–	134	8.97	118	11.16	111	10.74	192	9.16	–	–	27	12.04
Class B	55	6.21	–	–	–	–	–	–	35	8.70	58	7.53	–	–	27	9.44

See footnotes at end of table.

Table 1. Occupational average earnings: All machinery industries—Continued

(Number and average straight-time hourly earnings[1] of production workers in machinery manufacturing establishments, 23 selected areas,[2] November 1983)

Occupation	North Central						West							
	Milwaukee		Minneapolis-St. Paul		St. Louis		Denver-Boulder		Los Angeles-Long Beach		Portland		San Francisco-Oakland	
	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings
Machine-tool operators, production, class A	1,896	$11.71	851	$10.77	485	$11.63	–	–	1,787	$12.71	124	$11.40	103	$13.24
Automatic-lathe operators	239	11.81	47	10.66	30	12.20	–	–	83	11.80	–	–	–	–
Drill-press operators, radial	75	11.75	–	–	–	–	–	–	136	11.82	–	–	–	–
Drill-press operators, single- or multiple-spindle	59	11.74	133	10.47	65	10.48	–	–	23	9.40	–	–	–	–
Engine-lathe operators	141	11.35	–	–	113	10.25	–	–	323	13.12	22	11.50	–	–
Grinding-machine operators	445	11.02	74	10.86	38	10.97	–	–	284	12.92	–	–	–	–
Machine-tool operators, miscellaneous	575	12.05	235	10.90	43	12.14	28	$10.41	631	13.10	–	–	–	–
Milling-machine operators	106	11.31	57	10.62	75	13.54	–	–	135	12.43	17	10.02	–	–
Screw-machine operators, automatic	68	12.33	–	–	52	11.66	–	–	25	11.57	–	–	–	–
Turret-lathe operators, hand	188	12.40	117	10.91	–	–	–	–	147	12.09	28	11.77	–	–
Machine-tool operators, production, class B	610	11.37	740	9.66	603	9.20	104	7.92	492	8.38	66	10.10	147	10.32
Automatic-lathe operators	34	11.81	–	–	–	–	–	–	–	–	–	–	–	–
Drill-press operators, radial	54	11.89	–	–	29	9.79	–	–	–	–	–	–	–	–
Drill-press operators, single- or multiple-spindle	103	12.12	69	9.74	118	8.90	–	–	–	–	13	9.88	–	–
Engine-lathe operators	66	10.63	–	–	–	–	–	–	12	9.42	–	–	–	–
Grinding-machine operators	–	–	–	–	102	8.43	–	–	94	8.07	–	–	–	–
Machine-tool operators, miscellaneous	146	11.99	218	9.01	118	9.19	44	7.72	193	8.75	–	–	70	11.96
Milling-machine operators	88	11.26	83	10.44	26	9.60	–	–	43	8.88	–	–	–	–
Turret-lathe operators, hand	18	12.68	–	–	31	10.19	–	–	31	7.74	–	–	–	–
Machine-tool operators, production, class C	194	10.22	335	8.54	106	7.27	68	5.83	–	–	–	–	214	6.46
Engine-lathe operators	–	–	–	–	–	–	–	–	6	6.71	–	–	–	–
Machine-tool operators, miscellaneous	44	10.88	–	–	–	–	–	–	75	6.82	–	–	171	6.48
Turret-lathe operators, hand	–	–	–	–	–	–	–	–	20	5.72	–	–	–	–
Machine-tool operators, production, numerically controlled, set up and operate	277	12.06	342	10.58	259	11.36	118	10.26	893	14.72	40	11.07	–	–
Automatic-lathe operators	103	12.02	55	11.41	36	11.10	–	–	55	11.15	–	–	–	–
Drill-press operators, radial	–	–	–	–	–	–	–	–	7	11.59	–	–	–	–
Drill-press operators, single- or multiple-spindle	41	13.47	41	10.50	–	–	–	–	–	–	–	–	–	–
Engine-lathe operators	14	12.43	–	–	67	11.30	–	–	–	–	–	–	–	–
Machine-tool operators, miscellaneous	–	–	–	–	36	11.74	–	–	–	–	14	11.52	–	–
Turret-lathe operators, hand	–	–	–	–	–	–	–	–	31	10.85	–	–	–	–
Machine-tool operators, production, numerically controlled, operate only	–	–	–	–	–	–	–	–	43	10.75	–	–	–	–
Milling-machine operators	–	–	–	–	–	–	–	–	8	8.03	–	–	–	–

See footnotes at end of table.

Table 1. Occupational average earnings: All machinery industries—Continued

(Number and average straight-time hourly earnings[1] of production workers in machinery manufacturing establishments, 23 selected areas,[2] November 1983)

Occupation	North Central						West							
	Milwaukee		Minneapolis–St. Paul		St. Louis		Denver–Boulder		Los Angeles–Long Beach		Portland		San Francisco–Oakland	
	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings
Machine-tool operators, toolroom	276	$11.16	254	$10.75	111	$12.21	21	$10.83	292	$11.87	–	–	84	$14.06
One type of machine	137	11.89	21	12.03	12	12.00	7	11.32	171	12.46	–	–	–	–
Grinding-machine operators	68	10.86	–	–	–	–	–	–	106	12.62	–	–	–	–
Milling-machine operators	–	–	–	–	–	–	–	–	25	11.17	–	–	–	–
More than one type of machine	139	10.44	233	10.64	99	12.23	14	10.59	121	11.03	–	–	–	–
Assemblers	1,877	11.12	4,560	9.20	1,515	8.60	1,489	7.05	4,427	7.41	–	–	898	10.10
Class A	992	11.45	1,416	10.13	243	11.49	393	9.53	1,374	10.15	–	–	242	12.03
Class B	543	10.76	2,809	8.89	692	8.73	501	7.05	1,109	7.29	–	–	530	9.57
Class C	–	–	335	7.91	580	7.22	–	–	1,944	5.54	–	–	126	8.60
Carpenters, maintenance	16	11.97	–	–	–	–	–	–	33	12.92	–	–	–	–
Electricians, maintenance	171	12.77	36	13.76	82	11.56	–	–	86	13.94	10	$12.07	–	–
Inspectors	453	11.46	909	9.63	276	9.83	–	–	1,571	8.57	28	11.62	131	10.47
Class A	228	11.82	369	10.01	114	10.58	109	9.82	600	11.90	25	11.87	32	14.34
Class B	171	10.92	468	9.54	118	9.44	–	–	459	7.10	–	–	47	9.39
Class C	–	–	72	8.30	–	–	–	–	512	5.99	–	–	–	–
Janitors, porters, and cleaners	191	8.45	279	8.46	164	8.07	24	7.09	383	6.42	15	6.36	–	–
Laborers, material handling	406	10.51	139	9.23	321	8.05	–	–	97	8.45	20	7.71	–	–
Machinists, maintenance	–	–	–	–	32	13.81	–	–	24	11.16	–	–	17	14.75
Machinists, production	–	–	68	11.20	194	12.39	–	–	280	11.47	360	11.73	67	14.03
Mechanics, maintenance	269	12.01	153	11.84	69	10.79	44	10.12	272	12.09	22	11.63	–	–
Polishers and buffers, metal	–	–	–	–	41	10.56	–	–	164	9.64	–	–	–	–
Polishing- and buffing-machine operators	–	–	32	9.40	23	9.56	–	–	–	–	–	–	–	–
Punch-press operators	311	10.84	150	9.93	358	9.16	–	–	335	7.66	–	–	–	–
Class A	234	11.18	107	10.14	34	9.43	–	–	144	9.69	–	–	–	–
Setup workers, machine tools	58	11.92	33	10.41	149	10.64	–	–	–	–	–	–	–	–
Conventional machines	40	11.32	–	–	137	10.62	–	–	–	–	–	–	–	–
Tool and die makers	495	12.41	429	12.78	408	14.24	109	13.50	608	14.38	8	12.51	–	–
Jobbing	292	12.41	323	12.71	142	14.71	–	–	481	14.90	–	–	–	–
Other than jobbing	203	12.40	106	12.97	–	–	–	–	127	12.43	7	12.48	–	–
Tool clerks	37	10.95	42	9.89	26	9.22	–	–	116	9.15	–	–	11	10.92
Welders, hand	789	11.41	464	11.34	231	10.41	91	10.67	818	11.24	193	11.58	82	13.81
Class A	448	11.59	–	–	205	10.63	69	11.08	687	11.60	193	11.58	82	13.81
Class B	341	11.16	–	–	–	–	22	9.37	131	9.30	–	–	–	–
Welders, machine	–	–	1,161	10.68	45	8.81	97	7.90	166	9.92	–	–	–	–
Class A	–	–	1,096	10.71	–	–	20	9.90	94	10.91	–	–	–	–
Class B	–	–	65	10.11	38	8.60	77	7.38	–	–	–	–	–	–

[1] Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

[2] For definitions of areas, see individual area tables 2-32, footnote 1.

NOTE: Dashes indicate that no data were reported or that data did not meet publication criteria. Data for overall classifications may include data for subclassifications not shown separately.

Table 2. Occupational earnings distribution: Atlanta, Ga.—all machinery industries[1]

(Number and average straight-time hourly earnings[2] of production workers in selected occupations, November 1983)

Occupation[3]	Number of workers	Average hourly earnings	Percent of workers receiving straight-time hourly earnings (in dollars) of —																								
			Under 4.25	4.25 and under 4.50	4.50 - 4.75	4.75 - 5.00	5.00 - 5.25	5.25 - 5.50	5.50 - 5.75	5.75 - 6.00	6.00 - 6.25	6.25 - 6.50	6.50 - 6.75	6.75 - 7.00	7.00 - 7.25	7.25 - 7.50	7.50 - 7.75	7.75 - 8.00	8.00 - 8.50	8.50 - 9.00	9.00 - 9.50	9.50 - 10.00	10.00 - 10.50	10.50 - 11.00	11.00 - 11.50	11.50 - 12.00	12.00 and under 12.50
Machine-tool operators, production, class A	75	$8.39	–	–	–	–	–	–	–	–	–	–	–	5	3	11	8	13	4	28	28	–	–	–	–	–	–
Milling-machine operators	15	8.86	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	20	20	–	60	–	–	–	–	–	–
Machine-tool operators, production, class B	76	7.31	–	–	–	–	–	–	–	–	4	8	24	8	12	1	8	1	32	3	–	–	–	–	–	–	–
Engine-lathe operators	12	6.96	–	–	–	–	–	–	–	–	–	–	50	–	25	–	25	–	–	–	–	–	–	–	–	–	–
Milling-machine operators	8	6.27	–	–	–	–	–	–	–	–	38	38	25	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Machine-tool operators, production, class C	30	6.71	–	–	–	–	–	–	–	13	10	–	30	7	7	33	–	–	–	–	–	–	–	–	–	–	–
Machine-tool operators, miscellaneous	6	6.51	–	–	–	–	–	–	–	–	50	–	–	33	17	–	–	–	–	–	–	–	–	–	–	–	–
Machine-tool operators, production, numerically controlled, set up and operate	11	7.13	–	–	–	–	–	–	–	–	–	27	–	–	27	18	–	27	–	–	–	–	–	–	–	–	–
Assemblers	706	6.58	–	1	7	(4)	3	2	14	(4)	3	12	8	2	19	22	4	–	1	2	1	1	–	–	–	–	–
Class A	41	7.87	–	–	–	–	–	–	–	–	15	2	5	10	7	15	–	–	–	32	–	15	–	–	–	–	–
Class B	407	6.78	–	1	7	–	2	1	5	(4)	2	21	2	1	13	35	6	–	1	–	2	–	–	–	–	–	–
Class C	258	6.06	–	–	8	1	5	3	32	(4)	2	–	16	1	30	1	–	–	–	–	–	–	–	–	–	–	–
Electricians, maintenance	6	9.15	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Inspectors	63	6.85	–	–	–	3	13	–	2	–	13	10	6	16	–	8	10	3	33	17	17	17	–	–	17	–	–
Class A	12	7.05	–	–	–	17	–	–	–	–	17	–	–	–	–	42	–	–	8	17	–	–	–	–	–	–	–
Class B	28	7.45	–	–	–	–	–	–	–	–	21	–	–	21	–	–	21	7	11	7	11	–	–	–	–	–	–
Class C	23	6.01	–	–	–	–	35	–	4	–	–	26	17	17	–	–	–	–	–	–	–	–	–	–	–	–	–
Janitors, porters, and cleaners	30	5.78	7	10	–	–	3	–	30	23	3	3	–	7	10	–	–	–	3	–	–	–	–	–	–	–	–
Laborers, material handling	26	6.76	–	–	–	–	–	–	4	–	8	54	–	4	4	4	23	–	–	–	–	–	–	–	–	–	–
Machinists, production	10	9.73	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Mechanics, maintenance	24	8.45	–	–	–	–	–	–	–	–	–	–	–	8	13	17	8	–	–	25	13	–	–	13	4	–	–
Polishing- and buffing-machine operators	7	6.61	–	–	–	–	–	–	–	–	43	29	–	–	–	–	14	14	–	–	–	–	–	–	–	–	–
Punch-press operators	74	7.45	–	–	–	–	–	–	–	–	7	4	3	15	36	8	–	–	4	4	19	–	–	–	–	–	–
Class A	39	7.72	–	–	–	–	–	–	–	–	–	–	–	28	36	–	–	–	–	–	36	–	–	–	–	–	–
Class B	35	7.14	–	–	–	–	–	–	–	–	14	9	6	–	37	17	–	–	9	9	–	–	–	–	–	–	–
Setup workers, machine tools	38	8.44	–	–	–	–	–	–	–	–	–	–	–	5	–	21	–	16	21	8	13	–	16	–	–	–	–
Conventional machines	32	8.53	–	–	–	–	–	–	–	–	–	–	–	6	–	9	–	19	25	9	16	–	16	–	–	–	–
Tool and die makers	40	10.40	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	7	–	5	15	2	45	13	7	5
Other than jobbing	34	10.38	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	9	–	6	18	3	35	15	9	6
Tool clerks	10	5.62	–	–	–	–	30	30	–	–	20	20	–	–	–	–	–	3	26	1	5	–	5	–	–	–	–
Welders, hand	181	6.87	–	3	12	4	4	2	4	3	4	8	4	–	1	2	8	3	26	1	5	–	–	–	–	–	–
Class A	30	8.93	–	–	–	–	–	–	–	–	–	–	–	–	–	10	13	–	10	7	30	–	30	–	–	–	–
Class B	151	6.46	–	4	15	5	5	2	5	4	5	10	5	–	1	–	7	3	29	–	–	–	–	–	–	–	–
Welders, machine	55	6.21	–	5	–	5	13	4	9	–	7	4	9	7	16	20	–	–	–	–	–	–	–	–	–	–	–
Class B	55	6.21	–	5	–	5	13	4	9	–	7	4	9	7	16	20	–	–	–	–	–	–	–	–	–	–	–

[1] The Atlanta metropolitan area consists of Butts, Cherokee, Clayton, Cobb, DeKalb, Douglas, Fayette, Forsyth, Fulton, Gwinnett, Henry, Newton, Paulding, Rockdale, and Walton Counties.

[2] Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

[3] Overall occupation may include data for subcategories not shown separately. All workers were time-workers.

[4] Less than 0.5 percent.

NOTE: Because of rounding, sums of individual items may not equal 100. Dashes indicate no data.

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Table 3. Occupational earnings distribution: Baltimore, Md.—all machinery industries[1]

(Number and average straight-time hourly earnings[2] of production workers in selected occupations, November 1983)

Occupation and method of wage payment[3]	Number of workers	Average hourly earnings	Percent of workers receiving straight-time hourly earnings (in dollars) of —																									
			Under 4.50	4.50 and under 4.75	4.75 - 5.00	5.00 - 5.25	5.25 - 5.50	5.50 - 5.75	5.75 - 6.00	6.00 - 6.25	6.25 - 6.50	6.50 - 6.75	6.75 - 7.00	7.00 - 7.25	7.25 - 7.50	7.50 - 7.75	7.75 - 8.00	8.00 - 8.50	8.50 - 9.00	9.00 - 9.50	9.50 - 10.00	10.00 - 10.50	10.50 - 11.00	11.00 - 11.50	11.50 - 12.00	12.00 - 12.50	12.50 - 13.00	13.00 - 13.50	13.50 and over
Machine-tool operators, production, class A	408	$10.65	–	–	–	–	–	–	–	–	–	(4)	–	–	–	–	1	9	13	2	8	10	5	7	25	19	–	–	–
Time	386	10.61	–	–	–	–	–	–	–	–	–	(4)	–	–	–	–	1	10	14	3	8	11	2	7	25	20	–	–	–
Engine-lathe operators	53	10.22	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	11	11	6	23	–	9	17	23	–	–	–	–
Time	48	10.15	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	13	13	6	25	–	–	19	25	–	–	–	–
Grinding-machine operators	41	11.10	–	–	–	–	–	–	–	–	2	–	–	–	–	–	–	–	29	–	–	–	2	7	–	59	–	–	–
Machine-tool operators, miscellaneous	163	9.81	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	17	20	4	12	26	5	5	–	11	–	–	–
Machine-tool operators, production, class B	159	9.61	–	–	–	–	–	–	–	–	2	3	–	4	3	–	1	4	16	37	12	–	9	9	–	–	–	–	–
Machine-tool operators, production, class C	116	7.83	–	–	–	–	4	9	4	–	–	6	2	15	–	9	11	1	3	30	4	–	2	–	–	–	–	–	–
Machine-tool operators, production, numerically controlled, set up and operate	13	10.25	–	–	–	–	–	–	–	–	–	–	–	–	–	23	–	–	–	23	–	–	–	23	–	31	–	–	–
Machine-tool operators, production, numerically controlled, operate only	11	9.00	–	–	–	–	–	–	–	–	–	–	–	–	–	–	36	–	9	–	55	–	–	–	–	–	–	–	–
Machine-tool operators, toolroom	54	9.33	–	–	–	–	–	–	–	–	11	–	–	–	22	11	9	–	–	11	2	11	–	–	4	4	6	9	–
Operates more than one type of machine tool	52	9.23	–	–	–	–	–	–	–	–	12	–	–	–	23	12	10	–	–	12	2	12	–	–	–	4	6	10	–
Assemblers	539	7.67	[5] 10	5	10	3	1	2	3	1	1	2	8	2	4	1	3	2	8	8	1	1	5	4	7	7	–	–	–
Class A	121	11.00	–	–	–	–	–	–	–	–	–	–	–	–	–	–	5	3	12	6	–	2	2	7	30	32	–	–	–
Class B	318	7.10	–	9	16	4	3	3	4	–	3	4	10	3	7	1	4	2	5	11	2	–	7	4	–	–	–	–	–
Time	291	7.01	–	10	18	4	3	3	5	–	2	3	10	3	8	1	3	–	2	11	2	–	8	4	–	–	–	–	–
Electricians, maintenance	9	12.07	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	11	11	–	33	–	11	33	–
Time	7	11.74	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	14	14	–	43	–	14	14	–
Inspectors	138	9.57	3	3	–	–	–	6	6	4	3	–	–	–	4	8	2	4	3	4	1	–	12	16	15	2	4	–
Time	131	9.48	3	3	–	–	–	6	6	5	3	–	–	–	4	8	2	4	2	4	2	–	12	13	16	2	5	–
Class A	73	11.45	–	–	–	–	–	–	–	–	–	–	–	–	–	4	4	–	4	7	3	–	7	30	29	4	8	–
Time	68	11.42	–	–	–	–	–	–	–	–	–	–	–	–	–	4	4	–	4	7	3	–	7	25	31	4	9	–
Class B	46	8.04	–	–	–	–	–	17	17	–	9	–	–	–	11	7	–	11	2	2	–	–	24	–	–	–	–	–
Class C	19	6.03	21	21	–	–	–	–	–	32	–	–	–	–	–	26	–	–	–	–	–	–	–	–	–	–	–	–
Janitors, porters, and cleaners	38	6.15	–	8	–	24	–	16	–	11	13	13	–	3	–	–	–	3	11	–	–	–	–	–	–	–	–	–
Time	34	6.14	–	9	–	26	–	18	–	–	15	15	–	3	–	–	–	3	12	–	–	–	–	–	–	–	–	–
Laborers, material handling	30	5.96	–	17	3	–	17	7	17	3	–	17	10	–	–	–	–	10	–	–	–	–	–	–	–	–	–	–
Time	25	5.85	–	20	4	–	20	8	20	4	–	–	12	–	–	–	–	12	–	–	–	–	–	–	–	–	–	–
Machinists, maintenance	13	12.12	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	8	–	–	92	–	–	–
Time	10	12.16	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	10	–	–	90	–	–	–
Mechanics, maintenance	28	10.74	–	–	–	–	–	–	–	–	–	–	–	–	–	–	7	7	32	–	–	4	7	29	–	–	4	[6] 11	
Time	26	10.95	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	8	35	–	–	4	8	31	–	–	4	12	
Tool and die makers	115	10.58	–	–	–	–	–	–	–	–	–	–	–	1	–	–	5	–	16	26	–	5	15	10	–	3	–	5	[7] 14	
Jobbing	84	9.52	–	–	–	–	–	–	–	–	–	–	–	1	–	–	7	–	21	36	–	7	14	13	–	–	–	–	–
Welders, hand	115	9.57	–	–	–	–	–	–	–	1	3	2	–	1	–	4	18	21	10	4	–	10	3	16	7	–	–	–	–
Time	101	9.81	–	–	–	–	–	–	–	–	–	–	–	–	–	5	20	20	9	5	–	12	4	18	8	–	–	–	–
Class A	97	9.84	–	–	–	–	–	–	–	–	–	–	–	–	–	5	20	19	11	3	–	12	3	19	8	–	–	–	–
Time	91	9.90	–	–	–	–	–	–	–	–	–	–	–	–	–	5	21	15	10	3	–	13	3	20	9	–	–	–	–
Class B	18	8.08	–	–	–	–	–	–	–	6	17	11	–	6	–	–	11	33	–	11	–	–	6	–	–	–	–	–	–

[1] The Baltimore metropolitan area consists of Baltimore City and Anne Arundel, Baltimore, Carroll, Harford, and Howard Counties.

[2] Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

[3] Overall occupation may include data for subcategories not shown separately. Unless otherwise indicated, virtually all workers were timeworkers.

[4] Less than 0.5 percent.

[5] All workers were at $4.25 and under $4.50.

[6] Workers were distributed as follows: 4 percent at $13.50 and under $13.75; and 7 percent at $13.75 and under $14.

[7] Workers were distributed as follows: 1 percent at $13.50 and under $14; 4 percent at $14 and under $14.50; 7 percent at $14.50 and under $15; and 2 percent at $15 and over.

NOTE: Because of rounding, sums of individual items may not equal 100. Dashes indicate no data.

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Table 4. Occupational earnings distribution: Boston, Mass.—all machinery industries[1]

(Number and average straight-time hourly earnings[2] of production workers in selected occupations, November 1983)

Occupation and method of wage payment[3]	Number of workers	Average hourly earnings	Percent of workers receiving straight-time hourly earnings (in dollars) of —																										
			Under 5.00	5.00 and under 5.25	5.25 - 5.50	5.50 - 5.75	5.75 - 6.00	6.00 - 6.25	6.25 - 6.50	6.50 - 6.75	6.75 - 7.00	7.00 - 7.25	7.25 - 7.50	7.50 - 8.00	8.00 - 8.50	3.50 - 9.00	9.00 - 9.50	9.50 - 10.00	10.00 - 10.50	10.50 - 11.00	11.00 - 11.50	11.50 - 12.00	12.00 - 12.50	12.50 - 13.00	13.00 - 13.50	13.50 - 14.00	14.00 - 14.50	14.50 - 15.00	15.00 and over
Machine-tool operators, production, class A	784	$10.99	–	–	–	–	–	–	–	–	–	–	–	–	1	6	11	17	24	9	2	7	2	2	4	3	4	3	5
Time	149	10.64	–	–	–	–	–	–	–	–	–	–	–	–	4	19	10	9	11	2	5	26	1	–	9	–	–	5	–
Drill-press operators, radial	42	11.16	–	–	–	–	–	–	–	–	–	–	–	–	5	10	5	5	33	–	2	2	10	10	5	5	5	2	2
Incentive	37	11.49	–	–	–	–	–	–	–	–	–	–	–	–	–	8	–	5	38	–	3	3	11	11	5	5	5	3	3
Engine-lathe operators:																													
Time	20	9.52	–	–	–	–	–	–	–	–	–	–	–	–	5	45	–	–	35	15	–	–	–	–	–	–	–	–	–
Grinding-machine operators[4]	110	11.51	–	–	–	–	–	–	–	–	–	–	–	–	2	3	5	25	14	13	–	3	–	–	14	4	6	9	4
Machine-tool operators, miscellaneous:																													
Time	73	10.73	–	–	–	–	–	–	–	–	–	–	–	–	–	8	10	11	10	–	10	52	–	–	–	–	–	–	–
Milling-machine operators	89	11.43	–	–	–	–	–	–	–	–	–	–	–	–	–	4	16	13	21	9	–	4	3	–	4	4	3	4	11
Incentive	83	11.60	–	–	–	–	–	–	–	–	–	–	–	–	–	–	17	12	23	10	–	5	4	–	5	5	4	5	12
Turret-lathe operators, hand	30	10.86	–	–	–	–	–	–	–	–	–	–	–	–	3	17	10	10	7	–	20	10	3	10	–	–	10	–	–
Time	15	9.50	–	–	–	–	–	–	–	–	–	–	–	–	7	33	20	20	13	–	–	–	7	–	–	–	–	–	–
Machine-tool operators, production, class B	232	10.16	–	–	–	–	–	–	–	–	2	8	7	18	3	6	6	11	4	2	6	6	4	6	7	2	(5)	(5)	
Time	98	8.43	–	–	–	–	–	–	–	–	2	19	10	40	–	5	1	20	2	–	–	–	–	–	–	–	–	–	–
Drill-press operators, single- or multiple-spindle	15	8.62	–	–	–	–	–	–	–	–	–	–	–	80	–	–	7	–	7	–	7	–	–	–	–	–	–	–	–
Grinding-machine operators	9	8.76	–	–	–	–	–	–	–	–	22	11	11	11	–	–	17	11	–	33	–	–	–	–	–	–	–	–	–
Time	7	8.35	–	–	–	–	–	–	–	–	29	14	14	14	–	–	–	–	29	–	–	–	–	–	–	–	–	–	–
Milling-machine operators:																													
Time	17	8.71	–	–	–	–	–	–	–	–	–	53	–	–	–	–	6	41	–	–	–	–	–	–	–	–	–	–	–
Machine-tool operators, production, numerically controlled, set up and operate	167	9.99	–	–	–	–	–	–	–	–	–	–	6	25	8	6	8	10	13	2	9	5	5	–	1	–	–	3	
Time	92	8.69	–	–	–	–	–	–	–	–	–	–	11	48	14	11	3	15	–	–	–	–	–	–	–	–	–	–	
Incentive	75	11.58	–	–	–	–	–	–	–	–	–	–	–	–	–	–	13	4	28	4	20	11	12	–	1	–	–	7	
Automatic-lathe operators[4]	48	11.05	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	35	21	–	29	15	–	–	–	–	–	–	
Machine-tool operators, miscellaneous[4]	69	10.42	–	–	–	–	–	–	–	–	–	–	–	17	12	13	17	–	14	4	–	–	13	–	1	–	–	7	
Assemblers	1,430	7.81	3	3	4	4	6	4	5	7	3	13	5	5	17	3	2	2	2	2	–	11	–	–	–	–	–	–	
Time	1,342	7.48	3	4	4	4	6	4	5	8	3	14	6	6	18	1	1	1	–	1	–	11	–	–	–	–	–	–	
Class A	462	9.14	–	–	–	–	1	1	1	2	6	9	14	11	6	3	1	4	6	2	–	33	–	–	–	–	–	–	
Time	411	9.02	–	–	–	–	1	1	1	3	7	10	16	13	7	4	1	1	–	–	–	37	–	–	–	–	–	–	
Class B	388	7.24	–	2	2	5	9	3	11	16	4	10	4	6	13	6	5	1	–	4	–	–	–	–	–	–	–	–	
Time	351	7.05	–	3	2	5	10	3	13	18	4	11	4	7	14	1	1	1	–	5	–	–	–	–	–	–	–	–	
Class C	580	6.64	7	7	9	6	8	8	3	5	–	19	–	–	28	–	–	2	–	–	–	–	–	–	–	–	–	–	
Inspectors	574	8.71	(5)	–	2	3	2	2	2	8	3	2	4	7	23	3	(5)	9	3	9	17	1	1	–	–	–	–	–	
Time	532	8.52	(5)	–	2	4	2	2	2	8	3	2	4	8	25	3	(5)	9	1	8	17	–	–	–	–	–	–	–	
Class A	211	10.01	–	–	–	–	–	–	–	(5)	–	1	3	11	14	7	(5)	–	9	3	47	3	1	–	–	–	–	–	
Time	172	9.77	–	–	–	–	–	–	–	1	–	1	3	13	17	9	1	–	2	–	52	–	–	–	–	–	–	–	
Class B	224	8.53	–	–	–	(5)	1	(5)	2	13	6	3	6	8	19	–	–	21	–	20	–	–	–	–	–	–	–	–	
Class C	139	7.02	1	–	6	13	7	8	4	12	3	1	2	–	42	–	–	1	–	–	–	–	–	–	–	–	–	–	
Janitors, porters, and cleaners	209	7.20	1	4	7	3	8	5	5	1	(5)	14	13	12	–	27	–	–	–	–	–	–	–	–	–	–	–	–	
Time	195	7.16	1	5	8	3	8	5	5	1	1	15	14	6	–	29	–	–	–	–	–	–	–	–	–	–	–	–	
Laborers, material handling	35	6.54	–	3	–	–	29	14	23	–	6	9	–	–	17	–	–	–	–	–	–	–	–	–	–	–	–	–	
Punch-press operators	27	8.86	–	–	–	–	11	–	–	–	11	–	–	11	22	–	–	15	22	–	–	–	–	–	4	4	–	–	
Time	25	8.48	–	–	–	–	12	–	–	–	12	–	–	12	24	–	–	16	24	–	–	–	–	–	–	–	–	–	
Class A	12	10.82	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	33	50	–	–	–	–	–	8	8	–	–	
Time	10	10.01	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	40	60	–	–	–	–	–	–	–	–	–	

See footnotes at end of table.

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Table 4. Occupational earnings distribution: Boston, Mass.—all machinery industries[1]—Continued

(Number and average straight-time hourly earnings[2] of production workers in selected occupations, November 1983)

Occupation and method of wage payment[3]	Number of workers	Average hourly earnings	Percent of workers receiving straight-time hourly earnings (in dollars) of —																										
			Under 5.00	5.00 and under 5.25	5.25 - 5.50	5.50 - 5.75	5.75 - 6.00	6.00 - 6.25	6.25 - 6.50	6.50 - 6.75	6.75 - 7.00	7.00 - 7.25	7.25 - 7.50	7.50 - 8.00	8.00 - 8.50	8.50 - 9.00	9.00 - 9.50	9.50 - 10.00	10.00 - 10.50	10.50 - 11.00	11.00 - 11.50	11.50 - 12.00	12.00 - 12.50	12.50 - 13.00	13.00 - 13.50	13.50 - 14.00	14.00 - 14.50	14.50 - 15.00	15.00 and over
Tool and die makers	106	$11.32	–	–	–	–	–	–	–	–	–	–	–	–	–	–	3	1	11	23	22	3	33	–	5	–	–	–	–
Time	96	11.21	–	–	–	–	–	–	–	–	–	–	–	–	–	–	3	1	13	25	24	3	26	–	5	–	–	–	–
Jobbing	42	11.10	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	57	31	–	–	–	12	–	–	–	–
Other than jobbing	64	11.46	–	–	–	–	–	–	–	–	–	–	–	–	–	–	5	2	19	–	16	5	55	–	–	–	–	–	–
Time	54	11.29	–	–	–	–	–	–	–	–	–	–	–	–	–	–	6	2	22	–	19	6	46	–	–	–	–	–	–
Tool clerks	55	9.26	–	–	–	–	–	–	–	–	2	5	–	20	15	16	7	29	–	5	–	–	–	–	–	–	–	–	–
Time	46	9.26	–	–	–	–	–	–	–	–	2	7	–	11	17	20	9	35	–	–	–	–	–	–	–	–	–	–	–
Welders, hand	159	10.25	–	–	–	–	–	–	–	–	–	–	1	2	8	18	29	17	13	1	–	1	–	9	1	1	1	–	–
Time	120	9.69	–	–	–	–	–	–	–	–	–	–	1	2	10	21	38	17	12	–	–	–	–	–	–	–	–	–	–
Incentive	39	11.96	–	–	–	–	–	–	–	–	–	–	–	–	–	8	3	18	18	5	–	3	–	36	3	3	5	–	–
Class A	125	10.55	–	–	–	–	–	–	–	–	–	–	1	–	2	12	30	22	17	2	–	1	–	11	1	1	2	–	–
Time	86	9.91	–	–	–	–	–	–	–	–	–	–	1	–	2	14	43	23	16	–	–	–	–	–	–	–	–	–	–
Incentive	39	11.96	–	–	–	–	–	–	–	–	–	–	–	–	–	8	3	18	18	5	–	3	–	36	3	3	5	–	–
Class B	34	9.12	–	–	–	–	–	–	–	–	–	–	–	9	29	38	24	–	–	–	–	–	–	–	–	–	–	–	–

[1] The Boston metropolitan area consists of Suffolk County, 16 communities in Essex County, 34 in Middlesex County, 26 in Norfolk County, and 12 in Plymouth County.

[2] Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

[3] Overall occupation may include data for subcategories not shown separately. Unless otherwise indicated, virtually all workers were timeworkers.

[4] Predominately incentive workers.

[5] Less than 0.5 percent.

NOTE: Because of rounding, sums of individual items may not equal 100. Dashes indicate no data.

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Table 5. Occupational earnings distribution: Buffalo, N.Y.—all machinery industries[1]

(Number and average straight-time hourly earnings[2] of production workers in selected occupations, November 1983)

Occupation and method of wage payment[3]	Number of workers	Average hourly earnings	Percent of workers receiving straight-time hourly earnings (in dollars) of —																								
			Under 5.50	5.50 and under 5.75	5.75 - 6.00	6.00 - 6.25	6.25 - 6.50	6.50 - 6.75	6.75 - 7.00	7.00 - 7.25	7.25 - 7.50	7.50 - 7.75	7.75 - 8.00	8.00 - 8.25	8.25 - 8.50	8.50 - 8.75	8.75 - 9.00	9.00 - 9.25	9.25 - 9.50	9.50 - 9.75	9.75 - 10.00	10.00 - 10.25	10.25 - 10.50	10.50 - 11.00	11.00 - 11.50	11.50 - 12.00	12.00 - 12.50	12.50 - 13.00	13.00 and over
Machine-tool operators, production, class A	460	$10.06	–	–	–	–	–	–	–	1	3	5	–	5	4	–	1	2	17	3	2	13	7	14	12	2	1	5	3
Drill-press operators, radial	34	9.69	–	–	–	–	–	–	–	–	–	–	–	15	18	–	–	–	24	–	–	29	–	3	–	6	–	6	–
Drill-press operators, single- or multiple-spindle	22	8.92	–	–	–	–	–	–	–	–	36	–	–	–	–	–	–	32	9	–	–	9	–	14	–	–	–	–	–
Engine-lathe operators	24	9.53	–	–	–	–	–	–	–	–	–	13	–	–	–	–	13	–	38	–	–	17	–	17	–	–	–	–	4
Grinding-machine operators	103	9.74	–	–	–	–	–	–	–	–	–	17	–	19	3	–	–	–	–	3	–	16	2	17	15	3	–	6	–
Machine-tool operators, miscellaneous	145	10.49	–	–	–	–	–	–	–	4	4	–	–	–	3	–	–	–	9	6	3	17	6	14	17	1	4	6	6
Milling-machine operators	58	10.35	–	–	–	–	–	–	–	–	–	7	–	–	–	–	–	–	41	–	3	3	–	3	26	–	–	7	7
Turret-lathe operators, hand	59	10.14	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	41	–	–	–	34	17	3	–	–	5	–
Machine-tool operators, production, class B	109	8.15	3	6	–	–	3	–	6	16	3	6	3	28	8	–	–	–	–	1	3	1	1	8	4	–	3	1	–
Grinding-machine operators	14	8.92	–	–	–	–	–	–	–	57	–	–	–	–	–	–	–	–	–	–	–	–	7	–	29	–	–	7	–
Machine-tool operators, miscellaneous	66	8.24	5	5	–	–	5	–	5	5	5	–	5	45	–	–	–	–	–	–	5	–	–	14	–	–	5	–	–
Machine-tool operators, production, class C	94	7.29	[4] 22	–	–	–	–	–	–	–	49	–	–	13	–	–	–	–	–	–	–	–	14	–	–	–	2	–	–
Machine-tool operators, miscellaneous	69	7.25	26	–	–	–	–	–	–	–	52	–	–	–	–	–	–	–	–	–	–	–	19	–	–	–	3	–	–
Machine-tool operators, production, numerically controlled, set up and operate	82	11.24	–	–	–	–	–	–	–	–	–	–	–	5	5	–	–	–	–	–	–	–	11	7	22	26	7	17	–
Machine-tool operators, miscellaneous	56	11.43	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	16	11	27	23	11	13	–
Machine-tool operators, toolroom	73	10.70	–	–	–	–	–	–	–	–	–	–	–	–	–	–	16	–	–	5	–	5	5	16	27	14	10	–	–
Operates only one type of machine tool	64	10.92	–	–	–	–	–	–	–	–	–	–	–	–	–	–	6	–	–	6	–	6	6	19	30	16	11	–	–
Grinding-machine operators	40	10.78	–	–	–	–	–	–	–	–	–	–	–	–	–	–	10	–	–	10	–	–	10	30	15	7	17	–	–
Assemblers	494	10.49	–	–	–	–	–	–	[5]	2	1	2	1	2	3	1	3	5	6	5	2	8	1	24	10	–	20	4	–
Class A	296	10.36	–	–	–	–	–	–	–	–	2	–	1	1	–	–	8	10	8	2	14	1	27	17	–	2	7	–	–
Class B	114	10.27	–	–	–	–	–	–	–	5	2	4	4	4	–	4	15	–	–	–	–	–	1	35	–	–	27	–	–
Electricians, maintenance	39	10.29	–	–	–	–	–	–	–	–	8	–	–	8	5	13	–	–	–	–	–	–	–	–	56	5	–	5	–
Inspectors	111	10.44	–	–	–	–	–	–	–	3	5	–	–	–	–	–	5	–	3	19	–	6	–	39	5	4	–	14	–
Class A	71	10.95	–	–	–	–	–	–	–	–	4	–	–	–	–	–	–	–	–	7	–	10	–	45	7	6	–	21	–
Class B	38	9.54	–	–	–	–	–	–	–	8	5	–	–	–	–	–	13	–	3	42	–	–	–	29	–	–	–	–	–
Janitors, porters, and cleaners	42	7.90	5	–	19	14	–	–	–	–	–	–	–	–	2	–	45	5	–	–	–	–	–	10	–	–	–	–	–
Laborers, material handling	88	8.66	–	–	–	–	2	–	16	2	2	–	–	–	–	–	10	59	–	–	–	–	5	3	–	–	–	–	–
Machinists, maintenance	13	8.65	–	–	–	–	15	–	–	–	–	–	–	–	–	–	77	–	–	–	–	–	–	–	8	–	–	–	–
Machinists, production	67	10.34	–	–	–	–	–	30	–	–	–	–	–	–	9	–	–	–	–	–	–	–	–	–	12	3	–	39	7
Mechanics, maintenance	72	10.75	–	–	–	–	–	–	–	–	–	4	4	–	3	–	–	–	–	13	7	–	–	22	13	26	–	–	8
Punch-press operators	28	6.55	[6] 11	–	–	–	54	11	–	7	–	–	–	7	11	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Class B	22	6.30	14	–	–	–	68	–	–	9	–	–	–	9	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Tool and die makers	146	10.54	–	–	–	–	–	–	–	–	–	8	2	–	–	–	–	–	–	19	3	5	8	11	5	31	6	–	3
Jobbing	102	10.56	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	27	4	7	11	16	3	29	3	–	–
Other than jobbing	44	10.48	–	–	–	–	–	–	–	–	–	27	7	–	–	–	–	–	–	–	–	–	–	–	9	34	14	–	9
Tool clerks	22	8.36	–	–	–	–	–	14	27	–	9	–	–	–	–	–	18	–	14	5	–	–	–	5	–	9	–	–	–
Welders, hand	201	10.69	–	–	–	1	–	–	–	–	–	–	–	2	1	–	–	–	4	–	–	7	3	55	15	–	3	6	–
Class A	141	10.83	–	–	–	–	–	–	–	–	–	–	–	–	2	–	–	–	6	–	–	11	1	55	16	–	–	9	–
Class B	60	10.35	–	–	–	5	–	–	–	–	–	–	–	8	–	–	–	–	–	–	–	–	8	57	12	–	10	–	–

[1] The Buffalo metropolitan area consists of Erie and Niagara Counties.

[2] Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

[3] Overall occupation may include data for subcategories not shown separately. Unless otherwise indicated, virtually all workers were timeworkers.

[4] Workers were distributed as follows: 10 percent at $3.50 and under $3.75; 3 percent at $3.75 and under $4; 6 percent $4.50 and under $4.75; and 3 percent at $5 and under $5.25.

[5] Less than 0.5 percent.

[6] All workers were at $4.50 and under $4.75.

NOTE: Because of rounding, sums of individual items may not equal 100. Dashes indicate no data.

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Table 6. Occupational earnings distribution: Chicago, Ill.—all machinery industries[1]

(Number and average straight-time hourly earnings[2] of production workers in selected occupations, November 1983)

Occupation and method of wage payment[3]	Number of workers	Average hourly earnings	Percent of workers receiving straight-time hourly earnings (in dollars) of —																										
			Under 4.50	4.50 and under 4.75	4.75 - 5.00	5.00 - 5.25	5.25 - 5.50	5.50 - 6.00	6.00 - 6.50	6.50 - 7.00	7.00 - 7.50	7.50 - 8.00	8.00 - 8.50	8.50 - 9.00	9.00 - 9.50	9.50 - 10.00	10.00 - 10.50	10.50 - 11.00	11.00 - 11.50	11.50 - 12.00	12.00 - 12.50	12.50 - 13.00	13.00 - 13.50	13.50 - 14.00	14.00 - 14.50	14.50 - 15.00	15.00 - 15.50	15.50 - 16.00	16.00 and over
Machine-tool operators, production, class A	2,181	$11.50	–	–	–	–	–	–	–	–	–	1	7	2	3	3	11	10	8	11	13	14	5	1	11	(*)	–	–	–
Time	1,621	11.35	–	–	–	–	–	–	–	–	–	1	9	3	4	3	13	10	9	11	10	10	3	(*)	15	(*)	–	–	–
Incentive	560	11.94	–	–	–	–	–	–	–	–	–	–	–	1	1	5	6	7	6	13	24	25	10	1	1	–	–	–	–
Automatic-lathe operators	121	12.36	–	–	–	–	–	–	–	–	–	–	–	–	–	1	7	14	4	15	5	19	21	1	14	–	–	–	–
Time	78	12.26	–	–	–	–	–	–	–	–	–	–	–	–	–	–	10	22	1	15	8	–	23	–	21	–	–	–	–
Incentive	43	12.53	–	–	–	–	–	–	–	–	–	–	–	–	–	2	–	–	9	14	–	53	16	2	2	–	–	–	–
Drill-press operators, radial	164	11.15	–	–	–	–	–	–	–	–	–	–	9	–	–	5	25	10	11	5	12	16	1	6	–	–	–	–	–
Time	107	11.06	–	–	–	–	–	–	–	–	–	–	13	–	–	7	27	–	11	–	11	22	–	7	–	–	–	–	–
Drill-press operators, single- or multiple-spindle	96	11.38	–	–	–	–	–	–	–	–	–	–	–	3	6	8	11	15	1	13	30	4	5	1	2	–	–	–	–
Time	48	11.44	–	–	–	–	–	–	–	–	–	–	–	–	–	8	17	21	–	4	50	–	–	–	–	–	–	–	–
Incentive	48	11.33	–	–	–	–	–	–	–	–	–	–	–	6	13	8	6	8	2	21	10	8	10	2	4	–	–	–	–
Engine-lathe operators	121	10.13	–	–	–	–	–	–	–	–	–	–	23	6	6	17	10	12	7	12	–	–	–	–	7	–	–	–	–
Grinding-machine operators	401	11.86	–	–	–	–	–	–	–	–	–	–	–	2	–	1	16	8	11	10	21	12	5	(*)	12	–	–	–	–
Time	317	11.88	–	–	–	–	–	–	–	–	–	–	–	3	–	–	16	8	14	10	19	13	2	–	15	–	–	–	–
Incentive	84	11.80	–	–	–	–	–	–	–	–	–	–	–	–	–	7	15	11	2	11	26	8	15	2	1	–	–	–	–
Machine-tool operators, miscellaneous	515	11.13	–	–	–	–	–	–	–	–	–	3	19	(*)	(*)	1	1	12	3	9	18	26	8	–	–	–	–	–	–
Time	299	10.27	–	–	–	–	–	–	–	–	–	5	32	–	(*)	–	1	20	5	14	3	14	5	–	–	–	–	–	–
Milling-machine operators	433	11.74	–	–	–	–	–	–	–	–	–	–	2	7	6	2	17	7	10	11	4	4	(*)	–	28	2	–	–	–
Time	365	11.72	–	–	–	–	–	–	–	–	–	–	2	8	7	2	19	7	9	5	2	2	–	–	33	2	–	–	–
Incentive	68	11.82	–	–	–	–	–	–	–	–	–	–	–	–	–	1	3	4	16	47	13	13	1	–	–	–	–	–	–
Screw-machine operators, automatic	177	11.76	–	–	–	–	–	–	–	–	–	–	–	2	–	–	16	5	10	25	9	20	2	1	9	–	–	–	–
Turret-lathe operators, hand	153	11.64	–	–	–	–	–	–	–	–	–	–	–	–	16	8	5	9	14	7	14	4	3	–	21	–	–	–	–
Time	114	11.79	–	–	–	–	–	–	–	–	–	–	–	–	21	1	4	9	12	5	16	4	–	–	28	–	–	–	–
Machine-tool operators, production, class B	719	9.28	–	–	–	–	–	–	11	2	17	1	5	8	8	14	5	3	4	3	9	10	(*)	–	(*)	–	–	–	–
Time	624	8.90	–	–	–	–	–	–	13	3	20	1	5	8	9	14	5	2	4	3	8	3	–	–	–	–	–	–	–
Incentive	95	11.77	–	–	–	–	–	–	–	–	–	–	–	7	3	8	1	7	3	1	12	53	3	–	1	–	–	–	–
Automatic-lathe operators	40	11.07	–	–	–	–	–	–	–	–	–	–	–	2	–	47	2	5	–	2	5	30	2	–	2	–	–	–	–
Incentive	16	11.69	–	–	–	–	–	–	–	–	–	–	–	6	–	13	6	13	–	6	13	31	6	–	6	–	–	–	–
Drill-press operators, radial	35	11.38	–	–	–	–	–	–	–	–	–	–	–	26	–	–	–	–	–	9	51	14	–	–	–	–	–	–	–
Drill-press operators, single- or multiple-spindle	69	10.47	–	–	–	–	–	–	–	–	–	12	3	13	4	19	4	1	4	4	13	20	1	–	–	–	–	–	–
Time	49	9.88	–	–	–	–	–	–	–	–	–	16	4	16	2	24	6	–	6	6	18	–	–	–	–	–	–	–	–
Engine-lathe operators	10	11.77	–	–	–	–	–	–	–	–	–	–	–	–	–	30	–	–	–	–	–	70	–	–	–	–	–	–	–
Grinding-machine operators	116	10.15	–	–	–	–	–	–	–	–	–	–	–	3	32	29	5	5	15	5	5	1	–	–	–	–	–	–	–
Time	102	10.04	–	–	–	–	–	–	–	–	–	–	–	–	35	32	6	4	17	6	–	–	–	–	–	–	–	–	–
Incentive	14	11.00	–	–	–	–	–	–	–	–	–	–	–	21	7	7	–	14	–	–	43	7	–	–	–	–	–	–	–
Machine-tool operators, miscellaneous	290	7.71	–	–	–	–	–	–	28	6	42	(*)	6	–	–	2	1	–	–	–	6	10	–	–	–	–	–	–	–
Time	268	7.32	–	–	–	–	–	–	30	6	46	(*)	6	–	–	2	1	–	–	–	6	3	–	–	–	–	–	–	–
Milling-machine operators	74	9.19	–	–	–	–	–	–	–	–	–	–	22	34	22	12	–	1	–	4	4	1	–	–	–	–	–	–	–
Time	70	9.09	–	–	–	–	–	–	–	–	–	–	23	34	23	13	–	–	–	4	3	–	–	–	–	–	–	–	–
Screw-machine operators, automatic	16	10.96	–	–	–	–	–	–	–	–	–	–	–	–	–	25	19	13	19	–	13	6	6	–	–	–	–	–	–

See footnotes at end of table.

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Table 6. Occupational earnings distribution: Chicago, Ill.—all machinery industries[1]—Continued

(Number and average straight-time hourly earnings[2] of production workers in selected occupations, November 1983)

Occupation and method of wage payment[3]	Number of workers	Average hourly earnings	Percent of workers receiving straight-time hourly earnings (in dollars) of —																									
			Under 4.50	4.50 and under 4.75	4.75 - 5.00	5.00 - 5.25	5.25 - 5.50	5.50 - 6.00	6.00 - 6.50	6.50 - 7.00	7.00 - 7.50	7.50 - 8.00	8.00 - 8.50	8.50 - 9.00	9.00 - 9.50	9.50 - 10.00	10.00 - 10.50	10.50 - 11.00	11.00 - 11.50	11.50 - 12.00	12.00 - 12.50	12.50 - 13.00	13.00 - 13.50	13.50 - 14.00	14.00 - 14.50	14.50 - 15.00	15.00 - 15.50	15.50 - 16.00	16.00 and over
Machine-tool operators, production, class C	519	$8.39	-	-	-	-	-	12	15	3	5	6	11	5	6	8	12	5	5	1	5	(*)	-	-	-	-	-	-
Time	457	8.22	-	-	-	-	-	14	18	4	5	4	11	5	5	8	11	4	5	1	5	-	-	-	-	-	-	-
Incentive	62	9.59	-	-	-	-	-	-	-	-	3	21	13	3	8	6	13	13	8	3	5	3	-	-	-	-	-	-
Automatic-lathe operators	29	9.62	-	-	-	-	-	-	-	-	-	-	28	3	-	7	48	14	-	-	-	-	-	-	-	-	-	-
Drill-press operators, single- or multiple-spindle	56	9.66	-	-	-	-	-	-	-	-	-	7	14	2	20	2	36	11	5	-	2	2	-	-	-	-	-	-
Time	30	9.83	-	-	-	-	-	-	-	-	-	-	7	-	27	-	47	10	10	-	-	-	-	-	-	-	-	-
Incentive	26	9.47	-	-	-	-	-	-	-	-	-	15	23	4	12	4	23	12	-	-	4	4	-	-	-	-	-	-
Grinding-machine operators	44	8.85	-	-	-	-	-	-	36	-	-	2	-	5	2	14	7	9	16	5	5	-	-	-	-	-	-	-
Time	30	7.88	-	-	-	-	-	-	53	-	-	-	-	7	-	20	10	-	10	-	-	-	-	-	-	-	-	-
Machine-tool operators, miscellaneous	265	7.19	-	-	-	-	-	24	21	6	7	3	12	7	6	12	-	-	-	-	(*)	-	-	-	-	-	-	-
Milling-machine operators	62	10.05	-	-	-	-	-	-	13	-	13	-	15	-	2	-	-	5	10	5	39	-	-	-	-	-	-	-
Turret-lathe operators, hand	41	9.40	-	-	-	-	-	-	-	-	-	39	-	-	-	-	32	22	7	-	-	-	-	-	-	-	-	-
Machine-tool operators, production, numerically controlled, set up and operate	894	11.03	-	-	-	-	-	-	-	-	-	-	6	7	25	3	3	4	5	7	8	5	15	(*)	11	-	-	-
Time	819	10.95	-	-	-	-	-	-	-	-	-	-	6	8	27	3	3	5	4	6	7	4	15	-	12	-	-	-
Automatic-lathe operators	208	11.19	-	-	-	-	-	-	-	-	-	-	-	12	8	1	7	14	5	17	11	9	13	-	2	-	-	-
Time	179	11.08	-	-	-	-	-	-	-	-	-	-	-	14	9	-	8	17	2	17	8	7	15	-	2	-	-	-
Machine-tool operators, miscellaneous	112	9.41	-	-	-	-	-	-	-	-	-	-	-	1	81	1	4	2	2	7	2	-	-	-	-	-	-	-
Time	98	9.16	-	-	-	-	-	-	-	-	-	-	-	-	93	-	3	2	-	2	-	-	-	-	-	-	-	-
Milling-machine operators	189	10.95	-	-	-	-	-	-	-	-	-	-	13	13	8	13	-	-	13	4	4	4	1	-	25	-	-	-
Turret-lathe operators, hand	15	13.06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	7	33	-	-	-	-	53	-	-	-
Machine-tool operators, toolroom	2,171	12.95	-	1	-	-	-	-	-	-	1	-	1	-	1	(*)	5	5	6	8	10	10	9	5	12	9	3	11	2
Operates only one type of machine tool	1,364	12.63	-	2	-	-	-	-	-	-	1	-	1	-	-	1	6	5	9	9	11	9	13	5	7	6	1	13	-
Engine-lathe operators	114	11.42	-	14	-	-	-	-	-	-	-	-	-	-	-	-	2	7	13	-	-	28	22	14	-	-	-	-	-
Grinding-machine operators	485	13.54	-	-	-	-	-	-	-	-	1	-	-	-	-	(*)	8	11	2	3	8	1	12	1	5	7	3	36	-
Milling-machine operators	483	12.02	-	-	-	-	-	-	-	-	-	-	3	-	-	-	2	2	18	22	20	9	13	9	3	-	-	-	-
Operates more than one type of machine tool	807	13.49	-	-	-	-	-	-	-	-	1	-	-	-	3	-	3	3	-	5	9	13	3	4	21	15	6	6	6
Assemblers	4,035	8.50	1	(*)	4	2	18	1	5	5	6	3	5	2	8	6	7	4	4	1	9	3	(*)	(*)	4	-	-	-	-
Time	3,369	8.02	1	(*)	5	2	22	1	6	6	7	3	5	2	6	7	8	3	4	1	3	2	-	-	5	-	-	-	-
Incentive	666	10.92	-	-	-	-	-	-	(*)	1	1	3	2	4	19	(*)	3	8	6	3	39	10	(*)	(*)	-	-	-	-	-
Class A	1,417	11.01	-	-	-	-	-	-	-	1	(*)	4	6	3	10	5	15	9	10	2	15	8	(*)	(*)	13	-	-	-	-
Time	1,090	10.80	-	-	-	-	-	-	-	1	(*)	5	7	2	12	7	18	7	9	2	7	5	-	-	17	-	-	-	-
Incentive	327	11.69	-	-	-	-	-	-	-	-	-	-	-	2	3	(*)	6	14	11	1	43	19	1	1	-	-	-	-	-
Class B	1,091	8.93	-	-	-	-	-	-	1	11	18	4	9	5	14	14	6	1	2	3	11	(*)	-	-	-	-	-	-	-
Time	802	8.44	-	-	-	-	-	-	2	15	24	4	11	4	5	19	7	1	2	1	3	-	-	-	-	-	-	-	-
Incentive	289	10.26	-	-	-	-	-	-	-	(*)	2	3	3	7	40	-	1	3	1	6	33	1	-	-	-	-	-	-	-
Class C	1,527	5.87	3	1	11	5	48	3	13	5	4	1	1	(*)	1	1	1	1	(*)	-	2	-	-	-	-	-	-	-	-
Carpenters, maintenance	31	11.16	-	-	-	-	-	-	-	-	-	-	-	13	3	6	26	6	10	6	-	10	-	19	-	-	-	-	1
Electricians, maintenance	238	12.76	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	13	14	3	5	6	15	19	20	-	-	-	

See footnotes at end of table.

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Table 6. Occupational earnings distribution: Chicago, Ill.—all machinery industries[1]—Continued

(Number and average straight-time hourly earnings[2] of production workers in selected occupations, November 1983)

Occupation and method of wage payment[3]	Number of workers	Average hourly earnings	Percent of workers receiving straight-time hourly earnings (in dollars) of —																									
			Under 4.50	4.50 and under 4.75	4.75 - 5.00	5.00 - 5.25	5.25 - 5.50	5.50 - 6.00	6.00 - 6.50	6.50 - 7.00	7.00 - 7.50	7.50 - 8.00	8.00 - 8.50	8.50 - 9.00	9.00 - 9.50	9.50 - 10.00	10.00 - 10.50	10.50 - 11.00	11.00 - 11.50	11.50 - 12.00	12.00 - 12.50	12.50 - 13.00	13.00 - 13.50	13.50 - 14.00	14.00 - 14.50	14.50 - 15.00	15.00 - 15.50	15.50 - 16.00	16.00 and over
Inspectors	872	$10.57	-	-	-	(4)	-	-	1	4	2	7	2	4	8	6	6	10	17	9	5	2	10	1	5	-	-	-	-
Class A	418	11.54	-	-	-	-	-	-	-	-	-	-	-	5	7	6	10	12	11	10	3	4	20	2	11	-	-	-	-
Class B	302	10.11	-	-	-	-	-	-	3	3	(4)	11	4	6	10	3	4	7	32	7	11	-	-	-	-	-	-	-	-
Class C	152	8.83	-	-	-	3	-	-	-	16	13	18	3	-	9	10	-	13	2	12	1	-	-	-	-	-	-	-	-
Janitors, porters, and cleaners	403	7.86	-	4	-	3	(4)	15	10	6	15	4	6	5	11	7	4	(4)	-	10	-	-	-	-	-	-	-	-	-
Laborers, material handling	129	8.35	-	2	12	12	2	4	2	-	-	7	-	9	14	1	16	-	-	2	16	-	-	-	-	-	-	-	-
Machinists, maintenance	279	11.07	-	-	-	-	-	-	-	-	-	-	9	-	6	-	38	3	3	11	6	(4)	19	(4)	6	-	-	-	-
Machinists, production	327	11.34	-	-	-	-	-	-	-	-	-	-	5	-	7	2	16	9	15	13	13	1	3	-	-	16	-	-	-
Mechanics, maintenance	293	12.35	-	-	-	-	-	-	-	-	-	-	-	-	(4)	5	9	9	6	11	9	22	3	5	20	-	-	-	-
Polishers and buffers, metal	184	11.03	-	-	-	-	-	-	-	4	4	-	-	-	1	14	18	6	9	4	-	35	4	-	-	-	-	-	-
Time	122	10.34	-	-	-	-	-	-	-	7	7	-	-	-	-	19	26	9	13	7	-	7	7	-	-	-	-	-	-
Polishing- and buffing-machine operators	120	10.62	-	-	-	-	-	-	-	-	-	-	-	2	29	37	-	-	1	2	8	-	1	20	-	-	-	-	-
Time	114	10.54	-	-	-	-	-	-	-	-	-	-	-	3	31	39	-	-	-	-	7	-	-	21	-	-	-	-	-
Punch-press operators	598	6.53	6	5	3	3	13	18	16	12	9	4	2	1	1	2	(4)	1	(4)	2	4	1	(4)	-	-	-	-	-	-
Time	379	6.04	9	8	4	4	20	16	13	6	5	7	3	1	(4)	2	1	1	-	(4)	(4)	1	(4)	-	-	-	-	-	-
Class A:																													
Time	12	11.37	-	-	-	-	-	-	-	-	-	-	-	-	-	17	17	25	-	-	-	33	8	-	-	-	-	-	-
Class B	461	6.22	7	7	3	3	16	23	14	5	4	5	3	1	1	2	-	-	-	(4)	5	-	-	-	-	-	-	-	-
Time	367	5.86	9	9	4	4	21	16	13	6	5	7	3	1	(4)	1	-	-	-	(4)	(4)	-	-	-	-	-	-	-	-
Setup workers, machine tools:																													
Conventional machines	144	11.21	-	-	-	-	-	-	-	-	-	-	-	-	33	-	1	13	5	6	-	18	19	3	2	-	1	-	-
Time	129	10.94	-	-	-	-	-	-	-	-	-	-	-	-	37	-	2	13	5	6	-	18	19	-	-	-	-	-	-
Tool and die makers	1,760	13.90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(4)	3	6	4	3	7	11	15	12	10	12	12	6
Jobbing	1,448	13.89	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	6	4	3	7	11	16	11	12	13	10	5
Other than jobbing	312	13.95	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	3	5	6	3	10	12	8	17	1	5	21	8
Tool clerks	190	10.15	-	-	-	-	-	-	-	-	4	6	1	15	12	11	2	24	2	2	21	1	-	-	-	-	-	-	-
Welders, hand	745	9.91	-	-	-	-	-	-	13	-	-	5	9	2	17	8	6	3	7	9	3	20	(4)	(4)	-	-	-	-	-
Time	626	9.63	-	-	-	-	-	-	15	-	-	6	10	3	20	7	5	2	4	5	(4)	22	-	-	-	-	-	-	-
Class A	570	10.73	-	-	-	-	-	-	-	-	-	-	11	3	19	8	5	3	9	11	4	26	(4)	(4)	-	-	-	-	-
Time	470	10.53	-	-	-	-	-	-	-	-	-	-	14	3	23	9	6	3	5	7	(4)	30	-	-	-	-	-	-	-
Class B	175	7.24	-	-	-	-	-	-	55	-	-	22	-	-	10	6	7	-	-	-	-	-	-	-	-	-	-	-	-
Welders, machine	250	8.78	1	1	1	-	(4)	1	(4)	15	1	21	15	(4)	12	6	2	18	-	-	4	2	-	-	-	-	-	-	-
Time	244	8.75	1	1	1	-	(4)	1	(4)	15	1	22	15	(4)	13	5	-	18	-	-	4	2	-	-	-	-	-	-	-
Class A	192	9.16	-	-	-	-	-	-	-	13	-	17	19	-	16	7	-	21	-	-	5	3	-	-	-	-	-	-	-
Class B	58	7.53	3	3	3	-	2	5	2	21	3	36	3	2	2	2	7	5	-	-	-	-	-	-	-	-	-	-	-
Time	54	7.32	4	4	4	-	2	6	2	22	4	39	4	2	2	2	-	6	-	-	-	-	-	-	-	-	-	-	-

[1] The Chicago metropolitan area consists of Cook, DuPage, Kane, Lake, McHenry, and Will Counties.

[2] Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

[3] Overall occupation may include data for subcategories not shown separately. Unless otherwise indicated, virtually all workers were timeworkers.

[4] Less than 0.5 percent.

NOTE: Because of rounding, sums of individual items may not equal 100. Dashes indicate no data.

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Table 7. Occupational earnings distribution: Cleveland, Ohio—all machinery industries[1]

(Number and average straight-time hourly earnings[2] of production workers in selected occupations, November 1983)

Occupation[3]	Number of workers	Average hourly earnings	Percent of workers receiving straight-time hourly earnings (in dollars) of —																									
			Under 4.50	4.50 and under 5.00	5.00 - 5.50	5.50 - 6.00	6.00 - 6.50	6.50 - 7.00	7.00 - 7.50	7.50 - 8.00	8.00 - 8.50	8.50 - 9.00	9.00 - 9.50	9.50 - 10.00	10.00 - 10.50	10.50 - 11.00	11.00 - 11.50	11.50 - 12.00	12.00 - 12.50	12.50 - 13.00	13.00 - 13.50	13.50 - 14.00	14.00 - 14.50	14.50 - 15.00	15.00 - 15.50	15.50 - 16.00	16.00 - 16.50	16.50 - 17.00	17.00 and over
Machine-tool operators, production, class A	937	$10.15	-	-	-	-	-	-	(*)	2	4	13	12	16	24	14	5	1	1	1	3	2	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Automatic-lathe operators	41	10.46	-	-	-	-	-	-	-	24	-	-	-	-	49	-	-	7	-	-	15	-	2	2	-	-	-	-	-
Drill-press operators, radial	21	11.07	-	-	-	-	-	-	-	-	-	43	-	-	-	14	5	-	-	10	14	10	-	-	-	5	-	-	-
Drill-press operators, single- or multiple-spindle	49	9.78	-	-	-	-	-	-	-	-	-	33	-	-	65	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Engine-lathe operators	66	9.74	-	-	-	-	-	-	-	-	15	-	52	2	17	-	5	-	-	-	-	6	2	3	-	-	-	-	-
Grinding-machine operators	446	9.98	-	-	-	-	-	-	(*)	(*)	2	16	11	24	17	18	6	1	-	-	2	1	-	-	-	-	(*)	-	-
Machine-tool operators, miscellaneous	68	11.75	-	-	-	-	-	-	-	-	-	-	1	1	9	24	28	4	9	4	9	3	1	1	1	-	1	1	-
Milling-machine operators	96	9.94	-	-	-	-	-	-	-	4	14	10	2	13	49	3	-	-	-	-	-	4	-	-	-	1	-	-	-
Screw-machine operators, automatic	34	10.58	-	-	-	-	-	-	-	-	-	-	-	9	26	59	6	-	-	-	-	-	*	-	-	-	-	-	-
Turret-lathe operators, hand	116	10.03	-	-	-	-	-	-	-	1	3	12	24	25	16	9	-	-	-	-	3	3	-	-	-	1	-	-	2
Machine-tool operators, production, class B	473	8.92	-	-	-	2	2	10	5	5	9	19	18	10	5	5	-	-	1	9	-	-	-	-	-	-	-	-	-
Drill-press operators, radial	26	8.85	-	-	-	-	-	38	-	-	-	8	31	-	-	-	-	-	-	23	-	-	-	-	-	-	-	-	-
Drill-press operators, single- or multiple-spindle	39	8.91	-	-	-	-	-	-	15	21	21	-	8	21	-	3	-	-	8	5	-	-	-	-	-	-	-	-	-
Engine-lathe operators	28	9.11	-	-	-	-	-	-	-	-	32	36	14	-	-	7	-	-	-	11	-	-	-	-	-	-	-	-	-
Grinding-machine operators	161	9.40	-	-	-	-	-	-	2	1	5	33	22	9	15	10	-	-	-	3	-	-	-	-	-	-	-	-	-
Machine-tool operators, miscellaneous	10	10.48	-	-	-	-	-	-	-	-	-	-	60	-	-	10	-	-	-	30	-	-	-	-	-	-	-	-	-
Milling-machine operators	129	8.77	-	-	-	-	-	13	9	8	13	16	19	11	-	-	-	-	-	12	-	-	-	-	-	-	-	-	-
Turret-lathe operators, hand	32	8.88	-	-	-	-	-	28	13	9	6	3	13	-	-	9	-	-	-	19	-	-	-	-	-	-	-	-	-
Machine-tool operators, production, class C	360	7.10	-	2	7	15	6	18	14	6	15	14	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Grinding-machine operators	135	7.38	-	7	13	-	-	1	22	10	27	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Milling-machine operators	26	8.24	-	-	-	-	-	12	8	23	12	31	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Machine-tool operators, production, numerically controlled, set up and operate	343	10.40	-	-	-	-	-	(*)	1	9	8	3	23	6	9	(*)	7	13	-	4	10	1	1	(*)	-	1	1	1	1
Automatic-lathe operators	127	9.14	-	-	-	-	-	-	-	24	17	-	31	6	16	-	-	-	-	-	6	-	-	-	-	-	-	-	-
Machine-tool operators, miscellaneous	36	12.53	-	-	-	-	-	-	-	-	-	-	-	-	8	-	-	56	-	-	11	3	11	3	-	-	6	3	-
Milling-machine operators	106	10.12	-	-	-	-	-	1	5	-	4	5	27	8	5	1	17	23	-	3	3	-	-	-	-	-	-	-	-
Turret-lathe operators, hand	26	11.67	-	-	-	-	-	-	-	4	12	15	8	4	4	-	23	-	-	-	-	-	4	-	-	8	8	8	4
Machine-tool operators, toolroom	354	10.54	-	-	-	-	-	-	3	3	6	5	6	10	12	15	20	3	6	2	3	4	1	1	1	-	-	-	-
Operates only one type of machine tool	256	10.67	-	-	-	-	-	-	1	(*)	6	5	2	14	15	13	27	4	2	-	2	5	1	(*)	2	-	-	-	-
Drill-press operators, radial	11	9.72	-	-	-	-	-	-	-	-	9	18	18	9	18	27	-	-	-	-	-	-	-	-	-	-	-	-	-
Engine-lathe operators	16	10.74	-	-	-	-	-	-	-	-	-	31	-	-	19	6	6	13	6	-	-	13	-	6	-	-	-	-	-
Grinding-machine operators	115	10.44	-	-	-	-	-	-	-	1	7	4	2	23	11	10	30	4	2	-	-	3	2	-	-	-	-	-	-
Milling-machine operators	56	10.68	-	-	-	-	-	-	4	-	11	4	2	14	25	14	2	4	-	-	2	13	-	-	7	-	-	-	-
Operates more than one type of machine tool	98	10.19	-	-	-	-	-	-	8	10	7	3	15	-	3	19	3	-	15	8	5	-	-	2	-	-	-	-	-
Assemblers	1,414	8.55	[5] 12	-	3	7	-	9	10	1	7	8	8	1	6	6	4	1	9	7	(*)	(*)	(*)	-	(*)	-	(*)	-	-
Class A	602	11.02	-	-	-	-	-	-	-	-	-	11	16	2	14	9	9	2	18	17	(*)	(*)	(*)	-	(*)	-	(*)	-	-
Class B	544	7.43	-	-	7	17	-	12	26	3	19	6	2	1	(*)	3	1	-	3	-	-	-	-	-	-	-	-	-	-
Electricians, maintenance	76	12.34	-	-	-	-	-	-	-	-	-	1	4	16	-	3	4	7	13	20	1	1	30	-	-	-	-	-	-

See footnotes at end of table.

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Table 7. Occupational earnings distribution: Cleveland, Ohio—all machinery industries[1]—Continued

(Number and average straight-time hourly earnings[2] of production workers in selected occupations, November 1983)

Occupation[3]	Number of workers	Average hourly earnings	Percent of workers receiving straight-time hourly earnings (in dollars) of —																									
			Under 4.50	4.50 and under 5.00	5.00 - 5.50	5.50 - 6.00	6.00 - 6.50	6.50 - 7.00	7.00 - 7.50	7.50 - 8.00	8.00 - 8.50	8.50 - 9.00	9.00 - 9.50	9.50 - 10.00	10.00 - 10.50	10.50 - 11.00	11.00 - 11.50	11.50 - 12.00	12.00 - 12.50	12.50 - 13.00	13.00 - 13.50	13.50 - 14.00	14.00 - 14.50	14.50 - 15.00	15.00 - 15.50	15.50 - 16.00	16.00 - 16.50	16.50 - 17.00	17.00 and over
Inspectors	544	$9.86	-	-	-	-	3	-	10	2	4	16	10	5	6	23	12	(*)	(*)	2	8	(*)	-	-	-	-	-	-	-
Class A	221	10.99	-	-	-	-	-	-	-	(*)	4	5	10	2	12	14	29	(*)	1	3	19	1	-	-	-	-	-	-	-
Class B	183	9.09	-	-	-	-	-	-	11	6	3	36	16	11	3	13	-	-	-	2	-	-	-	-	-	-	-	-	-
Class C	140	9.07	-	-	-	-	11	-	23	1	4	9	-	-	-	52	-	-	-	-	-	-	-	-	-	-	-	-	-
Janitors, porters, and cleaners	134	8.15	-	20	-	1	1	7	2	12	12	4	5	7	11	12	-	5	1	-	-	-	-	-	-	-	-	-	-
Laborers, material handling	127	8.90	-	-	9	3	5	-	-	10	6	3	35	-	8	5	-	9	6	-	-	-	-	-	-	-	-	-	-
Machinists, maintenance	36	11.95	-	-	-	-	-	-	-	-	-	-	-	-	-	47	3	-	31	-	-	-	19	-	-	-	-	-	-
Machinists, production	29	10.54	-	-	-	-	-	-	-	-	-	-	-	31	41	-	-	24	3	-	-	-	-	-	-	-	-	-	-
Mechanics, maintenance	86	11.55	-	-	-	-	-	-	-	-	-	12	8	5	10	5	10	1	1	29	-	1	17	-	-	-	-	-	-
Polishing- and buffing-machine operators	20	9.45	-	-	-	-	-	-	10	-	-	40	-	-	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Punch-press operators	167	7.59	-	11	5	2	2	2	34	11	7	11	-	5	-	5	4	-	-	1	-	-	-	-	-	-	-	-	-
Class A	101	8.12	-	-	-	-	3	3	42	19	12	3	-	8	-	3	6	-	-	2	-	-	-	-	-	-	-	-	-
Class B	66	6.78	-	27	14	5	-	-	23	-	-	23	-	-	-	9	-	-	-	-	-	-	-	-	-	-	-	-	-
Tool and die makers	488	11.09	-	-	-	-	-	-	-	1	7	3	5	6	12	10	23	8	3	8	3	2	2	3	2	1	-	-	-
Jobbing	413	11.04	-	-	-	-	-	-	-	1	9	4	6	5	12	10	19	9	3	9	3	2	1	3	3	1	-	-	-
Other than jobbing	75	11.37	-	-	-	-	-	-	-	-	-	-	-	8	13	12	47	-	4	4	-	3	9	-	-	-	-	-	-
Tool clerks	67	10.13	-	-	-	-	-	-	3	15	3	6	15	-	10	22	-	1	21	3	-	-	-	-	-	-	-	-	-
Welders, hand	673	10.23	-	-	-	-	-	3	6	-	7	2	9	22	20	6	5	(*)	1	(*)	12	(*)	1	1	(*)	1	1	(*)	(*)
Class A	571	10.61	-	-	-	-	-	-	(*)	-	8	2	8	23	24	7	6	(*)	1	(*)	15	(*)	1	1	1	1	1	1	1
Class B	102	8.09	-	-	-	-	-	20	39	-	4	3	12	20	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-

[1] The Cleveland metropolitan area consists of Cuyahoga, Geauga, Lake, and Medina Counties.

[2] Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

[3] Overall occupation may include data for subcategories not shown separately. Virtually all workers were time-workers.

[4] Less than 0.5 percent.

[5] Workers were distributed as follows: 3 percent at $3.50 and under $4; and 9 percent at $4 and under $4.50.

NOTE: Because of rounding, sums of individual items may not equal 100. Dashes indicate no data.

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Table 8. Occupational earnings distribution: Cleveland, Ohio—special dies and tools[1]

(Number and average straight-time hourly earnings[2] of production workers in selected occupations, November 1983)

Occupation[3]	Number of workers	Average hourly earnings	Percent of workers receiving straight-time hourly earnings (in dollars) of —																									
			Under 7.00	7.00 and under 7.25	7.25 - 7.50	7.50 - 7.75	7.75 - 8.00	8.00 - 8.25	8.25 - 8.50	8.50 - 8.75	8.75 - 9.00	9.00 - 9.25	9.25 - 9.50	9.50 - 9.75	9.75 - 10.00	10.00 - 10.25	10.25 - 10.50	10.50 - 10.75	10.75 - 11.00	11.00 - 11.50	11.50 - 12.00	12.00 - 12.50	12.50 - 13.00	13.00 - 13.50	13.50 - 14.00	14.00 - 14.50	14.50 - 15.00	15.00 - 15.50	15.50 and over
Machine-tool operators, production, numerically controlled, set up and operate	17	$10.71	-	-	-	-	-	-	-	24	6	-	-	18	-	-	-	-	6	12	-	-	18	18	-	-	-	-	-
Milling-machine operators	17	10.71	-	-	-	-	-	-	-	24	6	-	-	18	-	-	-	-	6	12	-	-	18	18	-	-	-	-	-
Machine tool operators, toolroom	251	10.27	-	1	2	2	2	3	6	4	2	5	2	3	2	11	4	9	7	23	4	1	3	2	(4)	-	1	2	-
Operates only one type of machine tool	199	10.51	-	1	-	1	-	3	5	4	3	-	2	4	3	14	5	9	9	29	5	1	-	3	1	-	1	2	-
Drill-press operators, radial	11	9.72	-	-	-	-	-	-	9	9	9	-	18	-	9	-	18	27	-	-	-	-	-	-	-	-	7	-	-
Engine-lathe operators	14	10.33	-	-	-	-	-	-	-	36	-	-	-	-	-	21	-	-	7	7	14	7	-	-	-	-	-	-	-
Grinding-machine operators	70	10.31	-	-	-	1	-	3	9	1	4	-	-	4	1	9	9	10	7	34	7	-	-	-	-	-	-	8	-
Milling-machine operators	48	10.18	-	4	-	-	-	8	4	2	2	-	2	8	8	25	4	10	6	2	4	-	-	-	-	-	-	-	-
Operates more than one type of machine tool	52	9.38	-	-	10	10	10	4	10	6	-	23	-	-	-	-	-	10	-	-	-	-	15	-	-	-	4	-	-
Janitors, porters, and cleaners	6	8.40	[5] 17	-	-	-	-	17	-	33	-	17	-	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mechanics, maintenance	6	11.20	-	-	-	-	-	-	-	-	-	-	-	-	13	-	13	38	13	-	-	13	-	-	-	13	-	-	-
Tool and die makers	392	11.08	-	-	-	1	-	6	3	4	-	4	3	2	2	10	1	6	3	19	9	3	9	4	2	1	3	3	2
Jobbing	392	11.08	-	-	-	1	-	6	3	4	-	4	3	2	2	10	1	6	3	19	9	3	9	4	2	1	3	3	2
Welders, hand	11	9.72	-	9	-	-	-	-	9	9	9	-	9	-	18	-	-	-	-	36	-	-	-	-	-	-	-	-	-
Class A	11	9.72	-	9	-	-	-	-	9	9	9	-	9	-	18	-	-	-	-	36	-	-	-	-	-	-	-	-	-

[1] The Cleveland metropolitan area consists of Cuyahoga, Geauga, Lake, and Medina Counties. Data relate to workers in establishments primarily manufacturing special dies and tools, die sets, or jigs and fixtures.

[2] Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

[3] Overall occupation may include data for subcategories not shown separately. Virtually all workers were time-workers.

[4] Less than 0.5 percent.

[5] All workers were at $6.25 and under $6.50.

NOTE: Because of rounding, sums of individual items may not equal 100. Dashes indicate no data.

Table 9. Occupational earnings distribution: Dallas–Fort Worth, Texas—all machinery industries[1]

(Number and average straight-time hourly earnings[2] of production workers in selected occupations, November 1983)

Occupation[3]	Number of workers	Average hourly earnings	Percent of workers receiving straight-time hourly earnings (in dollars) of —																						
			Under 4.00	4.00 and under 4.25	4.25 - 4.50	4.50 - 4.75	4.75 - 5.00	5.00 - 5.50	5.50 - 6.00	6.00 - 6.50	6.50 - 7.00	7.00 - 7.50	7.50 - 8.00	8.00 - 8.50	8.50 - 9.00	9.00 - 9.50	9.50 - 10.00	10.00 - 10.50	10.50 - 11.00	11.00 - 11.50	11.50 - 12.00	12.00 - 12.50	12.50 - 13.00	13.00 - 13.50	13.50 - 14.00	14.00 and over
Machine-tool operators, production, class A	895	$10.62	–	–	–	–	–	–	–	–	–	–	2	1	4	6	14	9	25	24	12	4	(4)	–	–	–
Automatic-lathe operators	45	9.65	–	–	–	–	–	–	–	–	–	–	–	–	47	–	–	27	7	–	13	7	–	–	–	–
Drill-press operators, radial	26	9.09	–	–	–	–	–	–	–	–	–	–	27	–	38	–	12	12	–	12	–	–	–	–	–	–
Drill-press operators, single- or multiple-spindle	11	10.27	–	–	–	–	–	–	–	–	–	–	–	–	–	9	27	18	45	–	–	–	–	–	–	–
Engine-lathe operators	106	10.71	–	–	–	–	–	–	–	–	–	–	–	7	7	2	–	20	21	24	18	–	3	–	–	–
Grinding-machine operators	62	10.85	–	–	–	–	–	–	–	–	–	–	–	–	–	–	3	2	60	35	–	–	–	–	–	–
Machine-tool operators, miscellaneous	356	10.58	–	–	–	–	–	–	–	–	–	–	–	(4)	(4)	10	30	1	20	20	11	7	–	–	–	–
Milling-machine operators	66	11.05	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	21	47	6	17	9	–	–	–	–
Turret-lathe operators, hand	151	10.69	–	–	–	–	–	–	–	–	–	–	5	–	–	9	7	11	29	22	18	–	–	–	–	–
Machine-tool operators, production, class B	603	8.18	–	–	–	–	–	2	2	5	13	6	22	9	9	13	9	7	2	–	–	–	–	–	–	–
Drill-press operators, single- or multiple-spindle	71	7.00	–	–	–	–	–	–	–	28	52	–	–	15	–	1	–	3	–	–	–	–	–	–	–	–
Engine-lathe operators	13	9.36	–	–	–	–	–	–	–	–	–	–	–	8	15	31	46	–	–	–	–	–	–	–	–	–
Grinding-machine operators	53	6.62	–	–	–	–	–	19	19	19	–	2	38	2	–	–	–	–	2	–	–	–	–	–	–	–
Machine-tool operators, miscellaneous	366	8.57	–	–	–	–	–	–	–	–	7	6	27	9	13	17	13	8	1	–	–	–	–	–	–	–
Milling-machine operators	37	8.20	–	–	–	–	–	–	–	–	–	41	5	19	–	27	–	–	8	–	–	–	–	–	–	–
Turret-lathe operators, hand	18	8.16	–	–	–	–	–	–	–	–	39	6	11	–	22	–	–	–	22	–	–	–	–	–	–	–
Machine-tool operators, production, class C	263	7.60	–	–	–	4	–	6	4	10	3	8	13	24	19	5	2	2	–	–	–	–	–	–	–	–
Machine-tool operators, miscellaneous	186	8.10	–	–	–	–	–	–	4	4	–	8	18	34	26	6	–	–	–	–	–	–	–	–	–	–
Turret-lathe operators, hand	9	6.97	–	–	–	–	–	–	–	22	22	44	11	–	–	–	–	–	–	–	–	–	–	–	–	–
Machine-tool operators, production, numerically controlled, set up and operate	481	10.44	–	–	–	–	–	–	–	–	–	(4)	7	4	5	6	14	14	6	19	17	7	–	1	–	–
Automatic-lathe operators	195	10.04	–	–	–	–	–	–	–	–	–	–	11	10	8	9	12	6	8	9	25	2	–	–	–	–
Machine-tool operators, miscellaneous	85	10.75	–	–	–	–	–	–	–	–	–	–	12	–	–	1	26	2	1	13	11	34	–	–	–	–
Milling-machine operators	94	10.72	–	–	–	–	–	–	–	–	–	1	1	1	10	9	14	5	2	26	26	–	–	6	–	–
Machine-tool operators, toolroom	130	11.42	–	–	–	–	–	–	5	–	–	–	2	1	–	6	5	9	8	20	5	9	14	–	2	[5] 14
Operates only one type of machine tool	94	11.25	–	–	–	–	–	–	6	–	–	–	2	–	–	9	6	10	11	21	–	10	3	–	3	19
Grinding-machine operators	44	10.43	–	–	–	–	–	–	–	–	–	–	5	–	–	18	–	20	20	36	–	–	–	–	–	–
Assemblers	2,503	8.47	2	3	1	1	2	7	3	3	6	5	3	2	5	15	30	4	1	5	4	–	–	–	–	–
Class A	1,194	9.84	–	–	–	–	–	–	–	–	1	4	3	3	4	6	59	5	1	7	9	–	–	–	–	–
Class B	862	7.48	–	–	–	–	6	16	4	6	14	10	5	2	8	13	5	5	2	4	–	–	–	–	–	–
Class C	447	6.71	[6] 10	16	3	3	2	5	8	5	3	(4)	–	–	–	43	–	–	–	–	–	–	–	–	–	–
Electricians, maintenance	112	9.98	–	–	–	–	–	–	–	–	–	6	6	–	21	–	24	1	6	17	15	4	–	–	–	–
Inspectors	509	9.82	–	–	–	1	(4)	–	1	1	3	6	6	10	9	8	2	9	11	8	25	1	–	(4)	–	–
Class A	343	10.45	–	–	–	–	–	–	–	–	–	1	5	13	11	1	2	4	12	11	37	1	–	1	–	–
Class B	121	8.58	–	–	–	–	–	–	–	5	9	21	12	4	7	3	2	24	12	–	1	–	–	–	–	–
Janitors, porters, and cleaners	197	6.59	2	6	–	1	10	8	11	18	6	7	10	11	–	10	2	–	–	–	–	–	–	–	–	–
Laborers, material handling	75	8.13	–	–	–	–	–	–	1	8	19	–	4	25	5	37	–	–	–	–	–	–	–	–	–	–
Machinists, maintenance	25	9.69	–	–	–	–	–	–	–	–	–	8	24	–	16	–	4	4	16	4	24	–	–	–	–	–
Machinists, production	196	10.68	–	–	–	–	–	–	–	–	–	5	5	–	–	5	6	7	23	31	9	6	–	3	–	–
Mechanics, maintenance	160	10.11	–	–	–	–	–	–	–	–	–	13	–	–	24	7	5	1	11	15	15	2	7	–	–	–
Polishers and buffers, metal	36	7.34	–	–	–	6	–	17	–	–	–	36	8	6	14	14	–	–	–	–	–	–	–	–	–	–
Polishing- and buffing-machine operators	24	7.88	–	–	–	–	–	–	–	–	4	17	29	50	–	–	–	–	–	–	–	–	–	–	–	–
Punch-press operators:																										
Class A[7]	84	9.39	–	–	–	–	–	–	–	–	–	–	–	14	31	10	11	17	11	4	4	–	–	–	–	–
Tool and die makers	97	11.21	–	–	–	–	–	–	–	–	–	–	–	7	13	–	–	6	–	19	20	13	11	9	1	–
Other than jobbing	91	11.33	–	–	–	–	–	–	–	–	–	–	–	8	14	–	–	–	–	20	21	14	12	10	1	–
Tool clerks	58	8.88	–	–	–	–	–	–	–	12	–	2	17	12	5	10	14	12	14	–	2	–	–	–	–	–
Welders, hand	269	9.55	–	–	–	–	–	1	2	2	3	(4)	4	19	1	21	7	2	6	20	9	2	–	–	–	–
Class A	178	9.80	–	–	–	–	–	–	–	1	4	1	1	19	1	17	11	3	9	30	1	3	–	–	–	–
Class B	91	9.07	–	–	–	–	–	2	7	3	1	–	11	20	1	29	–	–	–	–	26	–	–	–	–	–
Welders, machine	318	7.71	–	–	–	–	4	6	2	18	–	17	5	30	–	–	–	12	4	3	(4)	(4)	–	–	–	–
Class A	134	8.97	–	–	–	–	–	–	–	–	–	10	5	48	–	–	–	28	1	6	1	1	–	–	–	–

[1] The Dallas–Fort Worth metropolitan area consists of Collin, Dallas, Denton, Ellis, Hood, Johnson, Kaufman, Parker, Rockwall, Tarrant, and Wise Counties.

[2] Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

[3] Overall occupation may include data for subcategories not shown separately. Virtually all workers were timeworkers.

[4] Less than 0.5 percent.

[5] All workers were at $14.50 and under $15.

[6] Workers were distributed as follows: 1 percent at $3.35 and under $3.50; 2 percent at $3.50 and under $3.75; and 7 percent at $3.75 and under $4.

[7] One-half of the workers were timeworkers.

NOTE: Because of rounding, sums of individual items may not equal 100. Dashes indicate no data.

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Table 10. Occupational earnings distribution: Denver-Boulder, Colo.—all machinery industries[1]

(Number and average straight-time hourly earnings[2] of production workers in selected occupations, November 1983)

Occupation[3]	Number of workers	Average hourly earnings	Percent of workers receiving straight-time hourly earnings (in dollars) of —																							
			Under 5.00	5.00 and under 5.25	5.25 - 5.50	5.50 - 5.75	5.75 - 6.00	6.00 - 6.25	6.25 - 6.50	6.50 - 6.75	6.75 - 7.00	7.00 - 7.25	7.25 - 7.50	7.50 - 7.75	7.75 - 8.00	8.00 - 8.50	8.50 - 9.00	9.00 - 9.50	9.50 - 10.00	10.00 - 10.50	10.50 - 11.00	11.00 - 11.50	11.50 - 12.00	12.00 - 12.50	12.50 - 13.00	13.00 - 13.50	13.50 and under 14.00
Machine-tool operators, production, class A:																										
Machine-tool operators, miscellaneous	28	$10.41	-	-	-	-	-	-	-	-	-	-	-	-	-	4	4	4	50	18	14	-	4	-	4	-
Machine-tool operators, production, class B	104	7.92	-	-	-	-	-	-	-	29	-	5	5	10	17	3	3	13	11	6	-	-	-	-	-	-
Machine-tool operators, miscellaneous	44	7.72	-	-	-	-	-	-	-	34	-	11	11	-	2	7	7	23	5	-	-	-	-	-	-	-
Machine-tool operators, production, class C	68	5.83	[4] 15	29	-	15	15	-	-	-	7	12	-	-	-	-	3	4	-	-	-	-	-	-	-	-
Machine-tool operators, production, numerically controlled, set up and operate	118	10.26	-	-	-	-	-	-	-	-	-	-	-	-	-	3	1	8	1	69	5	11	2	1	-	-
Machine-tool operators, toolroom	21	10.83	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	29	33	24	10	5	-	-
Operates only one type of machine tool	7	11.32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	71	14	14	-	-
Operates more than one type of machine tool	14	10.59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	43	50	-	7	-	-	-
Assemblers	1,489	7.05	8	7	10	8	6	5	4	5	2	6	3	3	3	7	4	8	4	5	1	1	[5]	[5]	1	[5]
Class A	393	9.53	-	-	-	-	-	-	-	[5]	-	-	-	1	5	20	11	15	15	19	5	2	1	2	4	1
Class B	501	7.05	1	1	2	5	5	5	7	13	5	18	10	8	6	5	2	5	[5]	1	-	-	-	-	-	-
Inspectors	368	7.51	2	2	8	8	4	7	7	6	5	6	7	3	2	4	4	5	4	9	2	[5]	1	1	1	1
Class A	109	9.82	-	-	-	-	-	-	-	-	-	-	6	2	3	9	8	18	11	29	-	-	2	5	4	4	2
Janitors, porters, and cleaners	24	7.09	-	4	8	-	-	-	-	-	8	50	21	-	-	-	8	-	-	-	-	-	-	-	-	-
Mechanics, maintenance	44	10.12	-	-	-	-	-	-	-	-	-	-	-	-	-	5	2	20	7	36	18	5	9	-	-	-
Welders, hand	91	10.67	-	-	-	-	-	-	-	-	-	-	5	-	-	-	1	5	11	40	10	-	5	5	16	-
Class A	69	11.08	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14	36	13	-	7	7	22	-
Class B	22	9.37	-	-	-	-	-	-	-	-	-	-	23	-	-	-	5	23	-	50	-	-	-	-	-	-
Welders, machine	97	7.90	-	-	-	-	-	-	-	36	-	2	-	26	1	-	10	-	13	11	-	-	-	-	-	-
Class A	20	9.90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	65	35	-	-	-	-	-	-
Class B	77	7.38	-	-	-	-	-	-	-	45	-	3	-	32	1	-	13	-	-	5	-	-	-	-	-	-

[1] The Denver-Boulder metropolitan area consists of Adams, Arapahoe, Boulder, Denver, Douglas, Gilpin, and Jefferson Counties.

[2] Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

[3] Overall occupation may include data for subcategories not shown separately. All workers were timeworkers.

[4] All workers were at $4.75 and under $5.

[5] Less than 0.5 percent.

NOTE: Because of rounding, sums of individual items may not equal 100. Dashes indicate no data.

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Table 11. Occupational earnings distribution: Detroit, Mich.—all machinery industries[1]

(Number and average straight-time hourly earnings[2] of production workers in selected occupations, November 1983)

Occupation[3]	Number of workers	Average hourly earnings	Percent of workers receiving straight-time hourly earnings (in dollars) of —																									
			Under 7.00	7.00 and under 7.25	7.25 - 7.50	7.50 - 7.75	7.75 - 8.00	8.00 - 8.25	8.25 - 8.50	8.50 - 8.75	8.75 - 9.00	9.00 - 9.25	9.25 - 9.50	9.50 - 9.75	9.75 - 10.00	10.00 - 10.50	10.50 - 11.00	11.00 - 11.50	11.50 - 12.00	12.00 - 12.50	12.50 - 13.00	13.00 - 13.50	13.50 - 14.00	14.00 - 14.50	14.50 - 15.00	15.00 - 15.50	15.50 - 16.00	16.00 - 16.50	16.50 and over
Machine-tool operators, production, class A	2,410	$12.70	-	-	-	-	-	-	-	-	-	1	1	2	1	6	9	9	7	14	10	9	8	7	1	7	1	4	3
Automatic-lathe operators	141	12.22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	53	-	15	9	-	1	18	1	-	4	-	-
Engine-lathe operators	159	13.50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	1	13	4	17	14	3	4	4	9	-	19	-
Grinding-machine operators	1,123	12.65	-	-	-	-	-	-	-	-	-	-	-	4	1	6	9	6	8	16	9	15	5	8	1	11	1	1	-
Machine-tool operators, miscellaneous	450	13.36	-	-	-	-	-	-	-	-	-	-	3	-	3	13	2	(4)	-	12	5	3	23	9	1	5	1	3	17
Milling-machine operators	414	12.01	-	-	-	-	-	-	-	-	-	7	-	2	-	6	9	15	12	15	14	3	3	3	2	5	1	4	-
Turret-lathe operators, hand	79	12.79	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23	13	10	3	27	-	-	5	1	-	-	19	-
Machine-tool operators, production, class B	879	10.92	-	2	1	1	-	4	1	1	1	2	4	3	4	9	9	15	4	40	-	-	-	-	-	-	-	-	-
Automatic-lathe operators	24	11.24	-	-	-	-	-	-	-	-	-	-	-	-	38	-	-	-	21	42	-	-	-	-	-	-	-	-	-
Engine-lathe operators	35	9.51	-	-	-	-	-	43	-	-	-	-	-	-	-	34	-	6	17	-	-	-	-	-	-	-	-	-	-
Grinding-machine operators	228	10.76	-	-	-	-	-	-	-	-	-	-	-	7	13	18	9	52	1	-	-	-	-	-	-	-	-	-	-
Milling-machine operators	78	10.11	-	-	-	-	-	-	-	-	-	-	41	-	-	26	10	10	13	-	-	-	-	-	-	-	-	-	-
Machine-tool operators, production, class C:																													
Milling-machine operators	26	9.58	-	-	-	-	-	38	-	-	-	8	-	-	-	-	54	-	-	-	-	-	-	-	-	-	-	-	-
Machine-tool operators, production, numerically controlled, set up and operate	387	11.61	-	-	-	-	-	-	-	-	-	-	-	4	-	6	14	15	27	19	8	2	1	3	-	-	1	-	-
Automatic-lathe operators	97	11.20	-	-	-	-	-	-	-	-	-	-	-	15	-	-	15	22	18	25	5	-	-	-	-	-	-	-	-
Drill-press operators, single- or multiple-spindle	16	12.03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	38	31	-	19	13	-	-	-	-	-	-	-
Engine-lathe operators	51	11.53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	29	20	43	4	-	4	-	-	-	-	-	-	-
Milling-machine operators	119	11.77	-	-	-	-	-	-	-	-	-	-	-	-	-	3	21	2	45	5	14	-	-	9	-	-	-	-	-
Machine-tool operators, production, numerically controlled, operate only	29	8.54	-	-	-	7	7	14	14	21	14	21	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-
Machine-tool operators, toolroom	1,179	12.42	-	-	-	-	-	-	-	-	-	3	3	1	4	2	4	12	10	9	18	8	9	6	7	3	2	(4)	-
Operates only one type of machine tool	909	12.39	-	-	-	-	-	-	-	-	-	-	3	1	5	3	5	11	12	7	20	9	6	7	5	4	2	-	-
Drill-press operators, radial	47	12.73	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	13	6	6	38	-	9	9	-	13	-	-	-
Engine-lathe operators	91	11.60	-	-	-	-	-	-	-	-	-	3	-	-	-	10	10	35	15	3	13	3	3	-	1	2	-	-	-
Grinding-machine operators	306	11.95	-	-	-	-	-	-	-	-	-	2	2	10	4	9	11	8	13	20	4	5	7	1	4	-	-	-	-
Milling-machine operators	233	12.42	-	-	-	-	-	-	-	-	-	8	-	5	-	3	8	19	3	18	6	8	14	6	3	-	-	-	-
Operates more than one type of machine tool	270	12.54	-	-	-	-	-	-	-	-	11	-	-	-	-	-	14	6	14	12	6	19	3	12	-	2	1	-	-
Assemblers	2,443	11.30	(4)	-	1	1	3	5	(4)	4	5	2	(4)	(4)	(4)	7	6	8	1	39	2	2	1	6	2	(4)	3	-	-
Class A	776	12.47	-	-	-	-	(4)	(4)	-	4	4	2	(4)	-	-	-	18	13	3	4	7	6	3	18	7	2	9	-	-
Class B	1,400	11.23	1	-	2	2	(4)	1	(4)	1	6	-	(4)	1	-	13	1	7	(4)	65	-	-	-	-	-	-	-	-	-
Electricians, maintenance	190	12.99	-	-	-	-	-	-	-	-	-	-	-	11	-	-	1	7	5	4	7	12	3	50	-	-	-	-	-
Inspectors	603	11.93	-	-	-	(4)	-	-	-	-	-	1	-	-	(4)	7	12	5	7	54	4	2	3	2	-	-	1	(4)	(4)
Class A	348	12.33	-	-	-	-	-	-	-	-	-	1	-	-	-	-	10	4	9	53	7	3	5	4	-	-	2	(4)	1
Class B	90	10.75	-	-	-	-	-	-	-	-	-	4	-	-	2	21	43	17	12	-	-	-	-	-	-	-	-	-	-
Janitors, porters, and cleaners	312	10.08	[5] 11	3	-	1	(4)	5	9	4	1	-	7	-	-	7	1	3	38	4	1	-	5	-	-	-	-	-	-
Laborers, material handling	208	10.50	3	-	-	-	-	7	-	-	-	7	22	-	-	19	2	17	-	14	2	-	-	7	-	-	-	-	-
Machinists, production	215	13.08	-	-	-	-	-	-	-	-	-	28	-	4	-	4	9	1	2	-	-	3	-	-	-	-	7	21	[5] 21
Mechanics, maintenance	206	13.67	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(4)	2	9	1	11	4	7	59	3	1	3	-	-
Tool and die makers	1,311	13.03	-	-	-	-	-	-	-	-	(4)	1	-	-	(4)	6	2	5	9	9	12	17	5	14	8	7	3	1	(4)
Jobbing	1,166	12.94	-	-	-	-	-	-	-	-	(4)	1	-	-	1	7	2	4	10	10	12	19	5	7	9	7	4	1	(4)
Other than jobbing	145	13.71	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	1	2	7	-	3	77	-	-	-	-	-

See footnotes at end of table.

Table 11. Occupational earnings distribution: Detroit, Mich.—all machinery industries[1]—Continued

(Number and average straight-time hourly earnings[2] of production workers in selected occupations, November 1983)

Occupation[3]	Number of workers	Average hourly earnings	Percent of workers receiving straight-time hourly earnings (in dollars) of —																										
			Under 7.00	7.00 and under 7.25	7.25 - 7.50	7.50 - 7.75	7.75 - 8.00	8.00 - 8.25	8.25 - 8.50	8.50 - 8.75	8.75 - 9.00	9.00 - 9.25	9.25 - 9.50	9.50 - 9.75	9.75 - 10.00	10.00 - 10.50	10.50 - 11.00	11.00 - 11.50	11.50 - 12.00	12.00 - 12.50	12.50 - 13.00	13.00 - 13.50	13.50 - 14.00	14.00 - 14.50	14.50 - 15.00	15.00 - 15.50	15.50 - 16.00	16.00 - 16.50	16.50 and over
Tool clerks	92	$11.59	–	–	–	–	–	–	–	2	3	–	1	1	1	12	–	7	10	52	10	1	–	–	–	–	–	–	–
Welders, hand	375	11.53	–	–	–	–	–	–	–	3	–	–	1	2	4	13	7	33	(4)	27	1	–	5	4	(4)	–	–	–	–
Class A	259	11.41	–	–	–	–	–	–	–	–	–	–	–	2	6	19	9	48	(4)	(4)	1	–	7	6	(4)	–	–	–	–
Welders, machine	54	10.74	–	–	–	–	4	4	–	4	7	–	–	7	6	19	15	6	4	4	19	–	4	–	–	–	–	–	–
Class A	27	12.04	–	–	–	–	–	–	–	–	–	–	–	–	–	–	30	11	7	7	37	–	7	–	–	–	–	–	–
Class B	27	9.44	–	–	–	–	7	7	–	7	15	–	–	15	11	37	–	–	–	–	–	–	–	–	–	–	–	–	–

[1] The Detroit metropolitan area consists of Lapeer, Livingston, Macomb, Oakland, St. Clair, and Wayne Counties.
[2] Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.
[3] Overall occupation may include data for subcategories not shown separately. All workers were timeworkers.
[4] Less than 0.5 percent.
[5] Workers were distributed as follows: 1 percent at $4 and under $4.25; 1 percent at $5 and under $5.25; 3 percent at $5.50 and under $5.75; 3 percent at $6 and under $6.25; and 3 percent at $6.25 and under $6.50.
[6] All workers were at $16.50 and under $17.

NOTE: Because of rounding, sums of individual items may not equal 100. Dashes indicate no data.

Table 12. Occupational earnings distribution: Detroit, Mich.—special dies and tools[1]

(Number and average straight-time hourly earnings[2] of production workers in selected occupations, November 1983)

Occupation[3]	Number of workers	Average hourly earnings	Percent of workers receiving straight-time hourly earnings (in dollars) of —																										
			Under 7.00	7.00 and under 7.25	7.25 - 7.50	7.50 - 7.75	7.75 - 8.00	8.00 - 8.25	8.25 - 8.50	8.50 - 8.75	8.75 - 9.00	9.00 - 9.25	9.25 - 9.50	9.50 - 9.75	9.75 - 10.00	10.00 - 10.25	10.25 - 10.50	10.50 - 10.75	10.75 - 11.00	11.00 - 11.50	11.50 - 12.00	12.00 - 12.50	12.50 - 13.00	13.00 - 13.50	13.50 - 14.00	14.00 - 14.50	14.50 - 15.00	15.00 - 15.50	15.50 and over
Machine-tool operators, production, numerically controlled, set up and operate	17	$11.34	–	–	–	–	–	–	–	–	–	–	–	–	–	18	6	–	–	41	18	–	18	–	–	–	–	–	–
Machine-tool operators, toolroom	1,056	12.46	–	–	–	–	–	–	–	–	–	–	3	1	4	2	1	3	2	12	11	10	16	7	10	6	8	3	2
Operates only one type of machine tool	838	12.35	–	–	–	–	–	–	–	–	–	–	4	1	5	2	1	3	2	11	12	8	17	8	6	7	6	4	2
Drill-press operators, radial	47	12.73	–	–	–	–	–	–	–	–	–	–	–	6	–	–	–	–	–	13	6	6	38	–	9	9	–	13	–
Engine-lathe operators	85	11.58	–	–	–	–	–	–	–	–	–	–	4	–	–	11	–	11	–	32	16	4	14	1	4	–	1	2	–
Grinding-machine operators	258	11.76	–	–	–	–	–	–	–	–	–	–	2	2	12	3	2	5	7	12	9	15	13	2	5	7	1	5	–
Milling-machine operators	229	12.43	–	–	–	–	–	–	–	–	–	–	8	–	5	–	–	3	–	7	19	3	18	7	8	14	6	3	–
Operates more than one type of machine tool	218	12.89	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	17	7	18	[5]12	1	23	4	15	–	1
Assemblers	45	10.43	–	–	–	–	7	13	13	7	7	7	7	–	–	–	–	4	–	–	4	9	–	–	–	22	–	–	–
Class A	29	11.00	–	–	–	–	10	10	–	10	–	10	10	–	–	–	–	7	–	–	7	–	–	–	–	34	–	–	–
Janitors, porters, and cleaners	42	7.67	[4]45	17	–	7	2	–	2	–	–	–	–	–	–	–	–	–	5	–	12	5	5	–	–	–	–	–	–
Mechanics, maintenance	25	13.49	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	24	–	8	8	28	–	24	8	–
Tool and die makers	1,149	12.94	–	–	–	–	–	–	–	–	(5)	1	–	–	1	5	2	1	1	5	10	9	12	20	5	6	9	8	5
Jobbing	1,149	12.94	–	–	–	–	–	–	–	–	(5)	1	–	–	1	5	2	1	1	5	10	9	12	20	5	6	9	8	5
Tool clerks	12	12.19	–	–	–	–	–	–	–	–	–	–	–	–	–	–	8	–	–	–	17	17	58	–	–	–	–	–	–

[1] The Detroit metropolitan area consists of Lapeer, Livingston, Macomb, Oakland, St. Clair, and Wayne Counties. Data relate to workers in establishments primarily manufacturing special dies and tools, die sets, or jigs and fixtures.
[2] Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.
[3] Overall occupation may include data for subcategories not shown separately. All workers were timeworkers.
[4] Workers were distributed as follows: 7 percent at $4 and under $4.25; 7 percent at $5 and under $5.25; 17 percent at $5.50 and under $5.75; and 14 percent at $6 and under $6.25.
[5] Less than 0.5 percent.

NOTE: Because of rounding, sums of individual items may not equal 100. Dashes indicate no data.

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Table 13. Occupational earnings distribution: Detroit, Mich.—machine tool accessories[1]

(Number and average straight-time hourly earnings[2] of production workers in selected occupations, November 1963)

Occupation[3]	Number of workers	Average hourly earnings	Percent of workers receiving straight-time hourly earnings (in dollars) of —																								
			Under 7.00	7.00 and under 7.25	7.25 - 7.50	7.50 - 7.75	7.75 - 8.00	8.00 - 8.25	8.25 - 8.50	8.50 - 8.75	8.75 - 9.00	9.00 - 9.25	9.25 - 9.50	9.50 - 9.75	9.75 - 10.00	10.00 - 10.25	10.25 - 10.50	10.50 - 10.75	10.75 - 11.00	11.00 - 11.50	11.50 - 12.00	12.00 - 12.50	12.50 - 13.00	13.00 - 13.50	13.50 - 14.00	14.00 - 14.50	14.50 - 15.00	15.00 and under 15.50
Machine-tool operators, production, class A	1,496	$12.22	–	–	–	–	–	–	–	–	–	2	1	3	2	–	8	5	7	6	6	17	12	14	2	7	–	9
Engine-lathe operators	90	12.75	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	20	2	6	8	22	24	–	4	–	13
Grinding-machine operators	909	12.53	–	–	–	–	–	–	–	–	–	–	–	4	1	–	6	5	5	6	7	17	10	18	1	7	–	13
Machine-tool operators, miscellaneous	164	11.34	–	–	–	–	–	–	–	–	–	–	9	–	9	–	37	6	–	–	–	11	–	9	7	12	–	–
Milling-machine operators	259	11.54	–	–	–	–	–	–	–	–	–	12	–	4	–	–	4	6	8	10	5	24	19	3	2	1	–	2
Turret-lathe operators, hand	58	11.91	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	32	18	7	4	32	–	–	7	–	–
Machine-tool operators, production, class B	466	9.96	–	3	1	2	–	8	1	2	2	3	6	5	8	10	6	11	2	26	3	–	–	–	–	–	–	–
Engine-lathe operators	27	8.91	–	–	–	–	–	56	–	–	–	–	–	–	–	41	4	–	–	–	–	–	–	–	–	–	–	–
Grinding-machine operators	227	10.75	–	–	–	–	–	–	–	–	–	–	–	7	13	6	12	4	5	52	1	–	–	–	–	–	–	–
Machine-tool operators, miscellaneous	133	8.80	–	11	4	8	–	18	4	7	7	11	–	4	–	2	–	23	–	3	–	–	–	–	–	–	–	–
Milling-machine operators	60	9.92	–	–	–	–	–	–	–	–	–	–	50	–	–	33	–	–	–	–	17	–	–	–	–	–	–	–
Machine-tool operators, production, class C	91	7.15	[4] 63	–	–	–	–	11	–	–	–	4	7	–	–	–	–	15	–	–	–	–	–	–	–	–	–	–
Milling-machine operators	26	9.58	–	–	–	–	–	38	–	–	–	8	–	–	–	–	–	54	–	–	–	–	–	–	–	–	–	–
Machine-tool operators, production, numerically controlled, set up and operate	178	11.31	–	–	–	–	–	–	–	–	–	–	–	8	–	7	–	14	8	20	14	20	3	3	1	1	–	–
Automatic-lathe operators	80	11.09	–	–	–	–	–	–	–	–	–	–	19	–	–	–	–	19	–	26	4	30	2	–	–	–	–	–
Engine-lathe operators	51	11.53	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	29	20	43	4	–	4	–	–	–	–
Milling-machine operators	25	11.21	–	–	–	–	–	–	–	–	–	–	–	–	–	16	–	40	–	8	–	24	8	–	–	4	–	–
Assemblers	171	10.25	5	–	15	18	2	5	–	5	–	–	3	–	1	–	–	–	1	1	9	2	–	18	7	6	–	4
Class A	78	13.23	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	21	4	–	38	15	13	–	8
Electricians, maintenance	21	13.02	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	52	38	10	–	–	–
Inspectors	108	11.64	–	–	–	2	–	–	–	–	–	4	–	–	2	–	–	8	36	3	5	19	2	–	11	8	–	–
Class A	61	12.51	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	15	–	5	8	34	3	–	20	15	–	–
Janitors, porters, and cleaners	42	10.08	–	5	–	–	–	–	–	–	5	–	55	–	–	10	–	–	–	–	–	26	–	–	–	–	–	–
Mechanics, maintenance	40	12.49	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	30	5	50	10	5	–	–	–

[1] The Detroit metropolitan area consists of Lapeer, Livingston, Macomb, Oakland, St. Clair, and Wayne Counties. Data relate to workers in establishments primarily manufacturing machine-tool accessories or measuring devices.

[2] Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

[3] Overall occupation may include data for subcategories not shown separately. All workers were timeworkers.

[4] Workers were distributed as follows: 17 percent at $5.25 and under $5.50; 26 percent at $5.50 and under $5.75; 10 percent at $6 and under $6.25; and 10 percent at $6.75 and under $7.

NOTE: Because of rounding, sums of individual items may not equal 100. Dashes indicate no data.

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Table 14. Occupational earnings distribution: Hartford–New Britain–Bristol, Conn.—all machinery industries[1]

(Number and average straight-time hourly earnings[2] of production workers in selected occupations, November 1983)

Occupation and method of wage payment[3]	Number of workers	Average hourly earnings	Percent of workers receiving straight-time hourly earnings (in dollars) of —																								
			Under 5.00	5.00 and under 5.25	5.25 - 5.50	5.50 - 5.75	5.75 - 6.00	6.00 - 6.25	6.25 - 6.50	6.50 - 6.75	6.75 - 7.00	7.00 - 7.25	7.25 - 7.50	7.50 - 8.00	8.00 - 8.50	8.50 - 9.00	9.00 - 9.50	9.50 - 10.00	10.00 - 10.50	10.50 - 11.00	11.00 - 11.50	11.50 - 12.00	12.00 - 12.50	12.50 - 13.00	13.00 - 13.50	13.50 - 14.00	14.00 - 14.50	14.50 and over
Machine-tool operators, production, class A	473	$9.18	–	–	–	–	–	(4)	(4)	(4)	(4)	(4)	8	5	15	19	11	15	10	8	5	1	(4)	1	–	–	–	–
Drill-press operators, radial	10	8.89	–	–	–	–	–	–	–	–	–	–	–	10	10	40	20	20	–	–	–	–	–	–	–	–	–	–
Engine-lathe operators	32	9.35	–	–	–	–	–	–	–	–	–	–	19	–	6	13	3	13	28	–	19	–	–	–	–	–	–	–
Grinding-machine operators	142	9.53	–	–	–	–	–	–	–	1	–	–	7	6	11	15	11	13	6	14	9	2	1	4	–	–	–	–
Machine-tool operators, miscellaneous	163	8.75	–	–	–	–	–	–	–	–	–	1	13	6	23	25	7	7	13	4	1	1	–	–	–	–	–	–
Milling-machine operators	68	9.35	–	–	–	–	–	1	1	–	3	–	–	6	10	9	18	28	7	9	7	–	–	–	–	–	–	–
Turret-lathe operators, hand	23	9.31	–	–	–	–	–	–	–	–	–	–	–	9	–	26	22	43	–	–	–	–	–	–	–	–	–	–
Machine-tool operators, production, class B	527	9.04	–	–	–	2	1	1	2	2	8	4	3	11	13	13	9	5	3	2	1	6	14	1	–	–	–	–
Time	357	8.95	–	–	–	2	1	2	2	3	12	5	4	10	14	10	1	–	3	2	–	9	19	–	–	–	–	–
Incentive	170	9.23	–	–	–	–	–	–	–	–	–	1	1	12	10	22	25	16	3	2	2	1	4	2	–	–	–	–
Drill-press operators, radial	10	8.16	–	–	–	–	–	–	–	–	20	–	–	–	40	30	10	–	–	–	–	–	–	–	–	–	–	–
Drill-press operators, single- or multiple-spindle[5]	13	9.06	–	–	–	–	–	–	–	–	–	–	–	8	23	15	8	38	8	–	–	–	–	–	–	–	–	–
Engine-lathe operators	28	8.49	–	–	–	–	–	–	–	4	7	–	–	21	14	32	–	–	11	11	–	–	–	–	–	–	–	–
Grinding-machine operators	183	8.47	–	–	–	4	2	2	–	2	2	5	9	12	15	14	14	6	3	2	2	1	3	2	–	–	–	–
Time	73	7.38	–	–	–	11	5	5	–	5	5	11	19	4	19	1	4	–	4	4	–	–	–	–	–	–	–	–
Incentive	110	9.19	–	–	–	–	–	–	–	–	–	1	2	17	12	22	20	10	2	–	4	2	5	4	–	–	–	–
Machine-tool operators, miscellaneous	182	10.06	–	–	–	–	–	2	2	1	18	4	1	4	8	4	2	1	–	–	–	17	38	–	–	–	–	–
Milling-machine operators	51	8.12	–	–	–	–	–	–	8	10	4	6	–	18	16	10	14	4	12	–	–	–	–	–	–	–	–	–
Time	39	7.77	–	–	–	–	–	–	10	13	5	8	–	23	15	13	–	–	13	–	–	–	–	–	–	–	–	–
Machine-tool operators, production, class C	350	9.20	–	5	5	6	2	7	1	1	2	3	3	8	4	5	3	1	–	–	–	35	12	–	–	–	–	–
Time	315	9.28	–	5	6	6	2	7	1	1	2	3	3	8	1	3	–	–	–	–	–	39	13	–	–	–	–	–
Drill-press operators, single- or multiple-spindle	21	8.06	–	–	–	–	–	5	–	–	–	5	10	29	24	19	10	–	–	–	–	–	–	–	–	–	–	–
Incentive	15	8.10	–	–	–	–	–	7	–	–	–	7	13	13	20	27	13	–	–	–	–	–	–	–	–	–	–	–
Grinding-machine operators	34	5.86	–	18	21	15	6	15	9	–	–	15	–	–	3	–	–	–	–	–	–	–	–	–	–	–	–	–
Machine-tool operators, production, numerically controlled, set up and operate	108	8.87	–	–	–	–	–	3	2	–	–	2	2	2	25	19	11	22	12	1	–	–	–	–	–	–	–	–
Time	91	8.78	–	–	–	–	–	3	2	–	–	2	2	2	26	21	8	23	10	–	–	–	–	–	–	–	–	–
Automatic-lathe operators	43	8.67	–	–	–	–	–	7	5	–	–	–	5	–	28	14	12	14	14	2	–	–	–	–	–	–	–	–
Time	26	8.21	–	–	–	–	–	12	8	–	–	–	8	–	35	19	–	12	8	–	–	–	–	–	–	–	–	–
Machine-tool operators, miscellaneous	24	8.98	–	–	–	–	–	–	–	–	–	–	–	8	29	13	21	4	25	–	–	–	–	–	–	–	–	–
Milling-machine operators	27	8.98	–	–	–	–	–	–	–	–	–	7	–	–	7	41	7	37	–	–	–	–	–	–	–	–	–	–
Machine-tool operators, production, numerically controlled, operate only	18	7.04	–	–	–	11	11	–	–	–	22	–	–	56	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Machine-tool operators, toolroom	302	9.61	–	–	–	–	–	–	–	–	–	–	–	5	8	24	10	17	17	4	9	1	1	3	1	(4)	(4)	(4)
Operates only one type of machine tool	206	9.84	–	–	–	–	–	–	–	–	–	–	–	7	7	16	8	17	19	4	13	1	2	4	1	(4)	(4)	(4)
Engine-lathe operators	36	9.73	–	–	–	–	–	–	–	–	–	–	–	8	8	17	3	17	19	19	–	–	8	–	–	–	–	–
Grinding-machine operators	62	10.71	–	–	–	–	–	–	–	–	–	–	–	–	–	2	5	27	18	–	32	2	2	10	2	–	–	2
Milling-machine operators	46	8.94	–	–	–	–	–	–	–	–	–	–	–	20	11	24	7	15	24	–	–	–	–	–	–	–	–	–
Operates more than one type of machine tool	96	9.10	–	–	–	–	–	–	–	–	–	–	–	–	11	42	15	17	13	3	–	–	–	–	–	–	–	–
Assemblers	751	9.15	(4)	(4)	1	2	1	2	3	2	1	6	1	8	7	14	9	13	4	(4)	(4)	24	(4)	–	–	–	–	–
Time	660	9.19	(4)	(4)	1	2	1	2	3	3	1	6	1	7	6	15	8	10	4	–	(4)	27	(4)	–	–	–	–	–
Class A	298	9.19	–	–	–	–	–	–	–	–	–	1	–	4	8	30	18	29	10	–	–	–	–	–	–	–	–	–
Time	270	9.17	–	–	–	–	–	–	–	–	–	1	–	4	8	32	19	25	11	–	–	–	–	–	–	–	–	–
Class B	210	8.26	–	–	2	6	2	5	6	9	4	11	(4)	13	8	5	2	2	–	–	1	21	1	–	–	–	–	–
Class C	243	9.87	(4)	1	1	1	(4)	2	4	–	(4)	8	4	8	7	3	2	2	1	1	–	55	–	–	–	–	–	–
Carpenters, maintenance	7	10.62	–	–	–	–	–	–	–	–	–	–	–	–	–	–	57	14	–	–	–	–	–	–	–	29	–	–
Electricians, maintenance	91	12.26	–	–	–	–	–	–	–	–	–	–	–	–	–	2	24	7	8	–	–	–	–	–	–	–	59	–
Inspectors	326	9.31	–	–	–	–	–	1	–	(4)	2	8	2	5	25	14	5	9	4	–	–	22	4	–	–	–	–	–
Class A	137	9.60	–	–	–	–	–	–	–	–	–	–	1	6	9	23	11	20	10	–	–	10	9	–	–	–	–	–
Class B	84	8.24	–	–	–	–	–	–	–	–	–	4	–	11	69	15	1	–	–	–	–	–	–	–	–	–	–	–
Class C	105	9.78	–	–	–	–	–	2	–	1	7	21	3	–	10	2	1	–	–	–	–	54	–	–	–	–	–	–

See footnotes at end of table.

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Table 14. Occupational earnings distribution: Hartford–New Britain–Bristol, Conn.—all machinery industries[1]—Continued

(Number and average straight-time hourly earnings[2] of production workers in selected occupations, November 1983)

Occupation and method of wage payment[3]	Number of workers	Average hourly earnings	Percent of workers receiving straight-time hourly earnings (in dollars) of —																								
			Under 5.00	5.00 and under 5.25	5.25 - 5.50	5.50 - 5.75	5.75 - 6.00	6.00 - 6.25	6.25 - 6.50	6.50 - 6.75	6.75 - 7.00	7.00 - 7.25	7.25 - 7.50	7.50 - 8.00	8.00 - 8.50	8.50 - 9.00	9.00 - 9.50	9.50 - 10.00	10.00 - 10.50	10.50 - 11.00	11.00 - 11.50	11.50 - 12.00	12.00 - 12.50	12.50 - 13.00	13.00 - 13.50	13.50 - 14.00	14.00 - 14.50	14.50 and over
Janitors, porters, and cleaners	106	$8.13	[6] 14	–	1	2	1	4	–	6	6	2	25	9	–	–	–	–	–	–	–	31	–	–	–	–	–	–
Laborers, material handling	130	7.60	4	4	–	–	5	–	1	4	–	1	28	18	27	8	–	–	–	–	–	2	–	–	–	–	–	–
Machinists, maintenance	187	12.06	–	–	–	–	–	–	–	–	–	–	–	–	2	2	31	12	–	–	–	–	–	–	–	53	–	–
Machinists, production	53	9.19	–	–	–	–	–	–	–	–	–	9	–	9	9	9	32	8	11	–	–	11	–	–	–	–	–	–
Polishers and buffers, metal	16	7.97	–	–	–	–	19	6	–	–	19	–	–	6	–	6	31	–	13	–	–	–	–	–	–	–	–	–
Polishing- and buffing-machine operators	26	8.31	–	–	–	–	–	–	–	–	19	–	4	35	23	–	–	4	–	–	–	15	–	–	–	–	–	–
Time	22	7.66	–	–	–	–	–	–	–	–	23	–	5	41	27	–	–	5	–	–	–	–	–	–	–	–	–	–
Setup workers, machine tools	367	10.33	–	–	–	–	–	–	–	–	–	–	–	–	27	21	(*)	1	2	1	–	2	38	6	2	–	–	–
Time	320	10.12	–	–	–	–	–	–	–	–	–	–	–	–	31	24	(*)	(*)	–	–	–	–	37	7	–	–	–	–
Conventional machines	367	10.33	–	–	–	–	–	–	–	–	–	–	–	–	27	21	(*)	1	2	1	–	2	38	6	2	–	–	–
Time	320	10.12	–	–	–	–	–	–	–	–	–	–	–	–	31	24	(*)	(*)	–	–	–	–	37	7	–	–	–	–
Tool and die makers	386	11.31	–	–	–	–	–	–	–	–	–	–	–	–	2	5	6	9	22	8	8	5	3	8	2	1	21	–
Jobbing	233	10.74	–	–	–	–	–	–	–	–	–	–	–	–	4	6	9	9	20	10	12	6	5	12	3	2	1	–
Other than jobbing	153	12.18	–	–	–	–	–	–	–	–	–	–	–	–	–	4	2	10	25	5	–	3	–	–	–	–	50	–
Tool clerks	56	9.39	–	–	–	–	–	–	4	–	–	4	7	9	29	11	–	4	–	–	–	34	–	–	–	–	–	–
Welders, hand	108	9.46	–	–	–	–	–	–	1	–	–	1	2	6	22	17	32	2	2	–	–	5	–	–	–	9	2	–
Class A	81	9.97	–	–	–	–	–	–	–	–	–	–	–	–	10	21	43	2	2	–	–	6	–	–	–	12	2	–
Class B	27	7.93	–	–	–	–	–	–	4	–	–	4	7	22	59	4	–	–	–	–	–	–	–	–	–	–	–	–

[1] The Hartford–New Britain–Bristol metropolitan area consists of 3 cities and 25 towns in Hartford County, New Hartford and Plymouth towns in Litchfield County, 3 towns in Middlesex County, Colchester town in New London County, and 10 towns in Tolland County.

[2] Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

[3] Overall occupation may include data for subcategories not shown separately. Unless otherwise indicated, virtually all workers were timeworkers.

[4] Less than 0.5 percent.

[5] Predominately incentive workers.

[6] Workers were distributed as follows: 2 percent at $4.25 and under $4.50; 7 percent at $4.50 and under $4.75; and 5 percent at $4.75 and under $5.

NOTE: Because of rounding, sums of individual items may not equal 100. Dashes indicate no data.

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Table 15. Occupational earnings distribution: Hartford–New Britain–Bristol, Conn.—special dies and tools and machine tool accessories[1]

(Number and average straight-time hourly earnings[2] of production workers in selected occupations, November 1983)

Occupation and method of wage payment[3]	Number of workers	Average hourly earnings	Percent of workers receiving straight-time hourly earnings (in dollars) of —																										
			Under 5.00	5.00 and under 5.25	5.25 - 5.50	5.50 - 5.75	5.75 - 6.00	6.00 - 6.25	6.25 - 6.50	6.50 - 6.75	6.75 - 7.00	7.00 - 7.25	7.25 - 7.50	7.50 - 7.75	7.75 - 8.00	8.00 - 8.25	8.25 - 8.50	8.50 - 8.75	8.75 - 9.00	9.00 - 9.50	9.50 - 10.00	10.00 - 10.50	10.50 - 11.00	11.00 - 11.50	11.50 - 12.00	12.00 - 12.50	12.50 - 13.00	13.00 - 13.50	13.50 and over
Machine-tool operators, production, class class A	182	$9.19	-	-	-	-	-	1	1	1	1	1	18	7	1	3	2	4	3	11	10	13	14	7	1	-	3	-	-
Engine-lathe operators	25	9.07	-	-	-	-	-	-	-	-	-	-	24	-	-	-	8	-	8	4	16	36	-	4	-	-	-	-	-
Grinding-machine operators	90	9.64	-	-	-	-	-	-	-	2	-	-	11	4	-	4	2	2	2	13	13	9	16	12	1	-	7	-	-
Machine-tool operators, miscellaneous	31	7.92	-	-	-	-	-	-	-	-	-	6	52	13	-	-	-	16	-	6	-	-	3	-	3	-	-	-	-
Milling-machine operators	24	9.13	-	-	-	-	-	4	4	-	8	-	-	4	4	4	-	-	4	13	8	21	25	-	-	-	-	-	-
Machine-tool operators, production, class B	228	7.83	-	-	-	4	2	2	4	4	18	7	7	5	4	11	3	5	3	9	7	4	4	-	-	-	-	-	-
Time	176	7.39	-	-	-	5	2	2	5	6	23	9	9	6	5	14	3	3	1	1	-	3	3	-	-	-	-	-	-
Grinding-machine operators	78	7.54	-	-	-	10	5	5	-	5	5	10	18	5	1	11	-	4	4	6	3	4	4	-	-	-	-	-	-
Time	65	7.24	-	-	-	12	6	6	-	6	6	12	22	5	-	14	-	-	2	-	-	5	5	-	-	-	-	-	-
Machine-tool operators, miscellaneous	64	7.36	-	-	-	-	-	-	6	-	48	6	2	5	5	16	3	2	2	5	2	-	-	-	-	-	-	-	-
Time	58	7.18	-	-	-	-	-	-	7	-	53	7	2	5	5	17	3	-	-	-	-	-	-	-	-	-	-	-	-
Milling-machine operators	34	7.84	-	-	-	-	-	-	12	15	6	9	-	-	9	12	3	9	-	18	6	3	-	-	-	-	-	-	-
Time	24	7.21	-	-	-	-	-	-	17	21	8	13	-	-	13	13	4	13	-	-	-	-	-	-	-	-	-	-	-
Machine-tool operators, production, class C	112	6.48	-	14	15	14	6	14	1	2	1	4	4	2	-	1	6	4	2	8	3	-	-	-	-	-	-	-	-
Time	84	5.72	-	19	20	19	8	19	1	2	1	4	4	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Grinding-machine operators	24	5.58	-	25	29	17	8	13	4	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Machine-tool operators, miscellaneous	62	6.51	-	13	16	11	6	19	-	-	-	3	3	3	-	2	10	2	2	5	5	-	-	-	-	-	-	-	-
Machine-tool operators, production, numerically controlled, set up and operate	32	8.23	-	-	-	-	-	9	6	-	-	6	6	6	-	9	6	6	19	3	13	9	-	-	-	-	-	-	-
Machine-tool operators, miscellaneous	10	8.85	-	-	-	-	-	-	-	-	-	-	-	20	-	10	-	-	30	10	10	20	-	-	-	-	-	-	-
Machine-tool operators, toolroom	246	9.75	-	-	-	-	-	-	-	-	-	-	-	4	2	-	7	15	3	10	17	19	5	11	1	2	3	1	1
Operates only one type of machine tool	171	9.99	-	-	-	-	-	-	-	-	-	-	-	5	4	-	5	5	4	9	15	20	5	16	1	2	5	1	2
Engine-lathe operators	31	9.90	-	-	-	-	-	-	-	-	-	-	-	-	10	-	10	-	3	3	19	23	23	-	-	10	-	-	-
Grinding-machine operators	50	10.91	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	20	14	-	40	2	2	12	2	2
Milling-machine operators	28	9.11	-	-	-	-	-	-	-	-	-	-	-	32	-	-	-	-	-	11	18	39	-	-	-	-	-	-	-
Operates more than one type of machine tool	75	9.19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	37	-	12	21	16	4	-	-	-	-	-	-
Assemblers	25	8.48	-	4	-	-	-	4	-	-	-	-	-	16	8	-	12	8	12	16	16	4	-	-	-	-	-	-	-
Time	16	8.27	-	6	-	-	-	6	-	-	-	-	-	25	-	-	13	6	19	6	13	6	-	-	-	-	-	-	-
Class A	11	8.35	-	-	-	-	-	-	-	-	-	-	-	36	18	-	9	9	-	9	9	9	-	-	-	-	-	-	-
Time	7	8.46	-	-	-	-	-	-	-	-	-	-	-	57	-	-	-	-	-	14	14	14	-	-	-	-	-	-	-
Class B	12	9.08	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17	8	25	25	25	-	-	-	-	-	-	-	-
Inspectors	55	8.80	-	-	-	-	-	2	-	2	4	2	-	5	5	2	4	15	22	5	22	11	-	-	-	-	-	-	-
Class A	26	9.52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	23	4	46	23	-	-	-	-	-	-	-
Class B	20	8.34	-	-	-	-	-	-	-	-	-	5	-	15	15	-	5	30	25	5	-	-	-	-	-	-	-	-	-
Class C	9	7.74	-	-	-	-	-	11	-	11	22	-	-	-	-	11	11	11	11	11	-	-	-	-	-	-	-	-	-
Janitors, porters, and cleaners	13	6.23	[4] 23	-	8	-	-	23	-	-	15	-	-	31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mechanics, maintenance	9	9.11	-	-	-	-	-	-	-	-	-	22	-	-	-	-	-	22	-	11	-	33	-	-	11	-	-	-	-
Polishers and buffers, metal	16	7.97	-	-	-	-	19	6	-	-	19	-	-	6	-	-	-	6	-	31	-	13	-	-	-	-	-	-	-
Tool and die makers	229	10.74	-	-	-	-	-	-	-	-	-	-	-	-	-	([5])	3	5	2	9	9	21	8	13	6	5	13	3	3
Jobbing	218	10.77	-	-	-	-	-	-	-	-	-	-	-	-	-	([5])	4	5	2	10	9	17	9	13	6	6	13	4	3
Tool clerks	8	7.40	-	-	-	-	-	-	25	-	-	25	-	-	-	50	-	-	-	-	-	-	-	-	-	-	-	-	-

[1] The Hartford–New Britain–Bristol metropolitan area consists of 3 cities and 25 towns in Hartford County, New Hartford and Plymouth towns in Litchfield County, 3 towns in Middlesex County, Colchester town in New London County, and 10 towns in Tolland County. Data relate to workers in establishments primarily manufacturing special dies and tools, die sets, jigs and fixtures, or machine-tool accessories and measuring devices.

[2] Excludes premium pay for overtime and for work on weekends, holidays, and late shifts

[3] Overall occupation may include data for subcategories not shown separately. Unless otherwise indicated, virtually all workers were timeworkers.

[4] All workers were at $4.50 and under $4.75.

[5] Less than 0.5 percent.

NOTE: Because of rounding, sums of individual items may not equal 100. Dashes indicate no data.

Table 16. Occupational earnings distribution: Houston, Texas—all machinery industries[1]

(Number and average straight-time hourly earnings[2] of production workers in selected occupations, November 1983)

Occupation[3]	Number of workers	Average hourly earnings	Percent of workers receiving straight-time hourly earnings (in dollars) of —																										
			5.00 and under 5.25	5.25 - 5.50	5.50 - 5.75	5.75 - 6.00	6.00 - 6.25	6.25 - 6.50	6.50 - 6.75	6.75 - 7.00	7.00 - 7.50	7.50 - 8.00	8.00 - 8.50	8.50 - 9.00	9.00 - 9.50	9.50 - 10.00	10.00 - 10.50	10.50 - 11.00	11.00 - 11.50	11.50 - 12.00	12.00 - 12.50	12.50 - 13.00	13.00 - 13.50	13.50 - 14.00	14.00 - 14.50	14.50 - 15.00	15.00 - 15.50	15.50 - 16.00	16.00 and under 16.50
Machine-tool operators, production, class A	711	$11.56	–	–	–	–	–	–	–	–	–	–	–	–	1	3	16	13	19	20	–	12	12	2	2	–	(4)	(4)	–
Automatic-lathe operators	42	11.59	–	–	–	–	–	–	–	–	–	–	–	–	–	–	55	–	–	–	–	17	29	–	–	–	–	–	–
Drill-press operators, radial	45	10.34	–	–	–	–	–	–	–	–	–	–	–	–	11	42	11	7	27	–	–	–	–	–	2	–	–	–	–
Engine-lathe operators	170	11.71	–	–	–	–	–	–	–	–	–	–	–	–	1	–	3	9	31	34	–	12	4	7	–	–	–	–	–
Grinding-machine operators	48	12.30	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2	6	6	38	–	29	15	–	–	–	4	–	–
Machine-tool operators, miscellaneous	187	11.81	–	–	–	–	–	–	–	–	–	–	–	–	–	–	11	29	13	11	–	–	29	–	5	–	1	1	–
Milling-machine operators	67	11.71	–	–	–	–	–	–	–	–	–	–	–	–	3	–	3	3	16	52	–	21	1	–	–	–	–	–	–
Turret-lathe operators, hand	129	10.92	–	–	–	–	–	–	–	–	–	–	–	–	–	4	45	10	24	7	–	8	2	–	–	–	–	–	–
Machine-tool operators, production, class B	808	9.71	1	1	1	1	1	2	5	1	6	7	10	4	5	10	1	7	6	11	21	1	–	–	–	–	–	–	–
Engine-lathe operators	71	10.59	–	–	–	–	–	–	–	–	1	–	–	–	14	27	8	17	–	24	4	4	–	–	–	–	–	–	–
Milling-machine operators	137	9.48	–	–	–	–	–	–	–	–	–	7	34	7	15	7	–	6	4	2	17	–	–	–	–	–	–	–	–
Turret-lathe operators, hand	87	10.59	–	–	–	–	–	–	–	–	–	–	10	–	6	23	3	14	10	24	7	2	–	–	–	–	–	–	–
Machine-tool operators, production, class C	115	9.68	–	–	–	–	–	–	–	–	3	3	2	10	44	4	8	8	19	–	–	–	–	–	–	–	–	–	–
Milling-machine operators	24	9.69	–	–	–	–	–	–	–	–	–	–	–	–	58	8	17	17	–	–	–	–	–	–	–	–	–	–	–
Machine-tool operators, production, numerically controlled, set up and operate	577	11.86	–	–	–	–	–	–	–	–	2	2	3	–	2	4	7	6	4	4	22	27	17	–	1	–	–	–	–
Engine-lathe operators	139	12.41	–	–	–	–	–	–	–	–	–	–	–	–	–	9	–	7	7	–	6	34	37	–	–	–	–	–	–
Machine-tool operators, miscellaneous	45	11.75	–	–	–	–	–	–	–	–	–	–	–	–	–	–	20	29	7	–	–	11	33	–	–	–	–	–	–
Milling-machine operators	124	11.25	–	–	–	–	–	–	–	–	–	7	7	–	–	7	15	3	1	3	15	35	6	–	–	–	–	–	–
Turret-lathe operators, hand	143	11.59	–	–	–	–	–	–	–	–	6	–	6	–	6	–	6	3	7	5	1	41	18	–	–	–	–	–	–
Machine-tool operators, production, numerically controlled, operate only	188	6.98	30	4	15	–	–	–	14	5	–	–	–	–	5	19	–	8	–	–	–	–	–	–	–	–	–	–	–
Machine-tool operators, toolroom	88	12.18	–	–	–	–	–	–	–	–	–	–	–	–	–	–	17	11	7	10	7	5	41	–	2	–	–	–	–
Operates only one type of machine tool	40	11.55	–	–	–	–	–	–	–	–	–	–	–	–	–	–	38	7	15	2	15	–	17	–	5	–	–	–	–
Grinding-machine operators	40	11.55	–	–	–	–	–	–	–	–	–	–	–	–	–	–	38	7	15	2	15	–	17	–	5	–	–	–	–
Assemblers	868	10.68	–	–	–	–	–	–	1	–	2	1	1	2	8	7	22	7	24	11	8	5	1	–	–	–	–	–	–
Class A	483	10.89	–	–	–	–	–	–	–	–	–	–	–	–	2	11	37	5	17	12	7	7	1	–	–	–	–	–	–
Class B	343	10.77	–	–	–	–	–	–	–	–	–	–	–	5	18	3	3	11	35	12	11	1	–	–	–	–	–	–	–
Electricians, maintenance	162	11.76	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	57	17	2	8	6	3	6	1	–	–	–
Inspectors	647	11.31	2	–	1	–	–	–	–	–	–	(4)	4	2	5	6	25	2	6	19	23	2	(4)	1	(4)	–	–	–	–
Class A	500	11.57	–	–	–	–	–	–	–	–	–	–	–	2	4	8	31	2	7	12	30	2	1	–	(4)	–	–	–	–
Class B	123	11.22	–	–	–	–	–	–	–	–	–	–	–	18	5	12	–	2	4	5	50	–	–	5	–	–	–	–	–
Janitors, porters, and cleaners	119	7.68	10	3	12	3	8	3	8	–	4	7	4	6	1	7	1	19	3	–	–	–	–	–	–	–	–	–	–
Laborers, material handling	129	9.15	–	12	4	–	4	–	–	6	4	1	–	4	–	–	33	26	8	–	–	–	–	–	–	–	–	–	–
Machinists, maintenance	43	12.49	–	–	–	–	–	–	–	–	–	–	–	–	–	–	12	–	–	23	2	5	58	–	–	–	–	–	–
Machinists, production	1,249	11.59	–	–	–	–	–	–	–	–	1	1	–	2	6	4	5	9	4	24	26	9	6	–	1	–	–	1	1
Mechanics, maintenance	260	12.20	–	–	–	–	–	–	–	–	–	–	–	2	–	9	9	11	3	10	5	16	3	24	–	5	3	–	–
Punch-press operators	29	9.12	–	–	–	–	–	–	–	–	–	3	28	–	34	–	34	–	–	–	–	–	–	–	–	–	–	–	–
Class A	19	9.06	–	–	–	–	–	–	–	–	–	5	42	–	–	–	53	–	–	–	–	–	–	–	–	–	–	–	–
Tool and die makers	212	12.02	–	–	–	–	–	–	–	–	–	–	–	–	–	–	3	42	–	7	7	6	28	5	–	2	–	(4)	–
Other than jobbing	172	12.02	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	51	–	–	9	3	28	6	–	3	–	1	–
Tool clerks	92	9.20	4	–	–	–	–	1	–	–	11	1	–	25	7	23	8	8	4	5	2	1	–	–	–	–	–	–	–
Welders, hand	915	10.25	–	–	–	–	–	–	–	–	(4)	3	1	13	11	4	31	2	15	12	4	1	(4)	1	(4)	–	–	–	–
Class A	736	10.56	–	–	–	–	–	–	–	–	1	–	–	11	7	3	35	3	19	14	5	1	1	1	(4)	–	–	–	–
Class B	177	9.00	–	–	–	–	–	–	–	–	–	17	7	23	28	8	15	2	–	–	–	–	–	–	–	–	–	–	–
Welders, machine	125	11.08	–	–	–	–	–	–	–	–	–	–	–	5	–	4	18	44	2	2	6	14	–	1	4	–	–	–	–
Class A	118	11.16	–	–	–	–	–	–	–	–	–	–	–	5	–	–	17	47	2	3	7	15	–	1	4	–	–	–	–

[1] The Houston metropolitan area consists of Brazoria, Fort Bend, Harris, Liberty, Montgomery, and Waller Counties.

[2] Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

[3] Overall occupation may include data for subcategories not shown separately. Virtually all workers were time-workers.

[4] Less than 0.5 percent.

NOTE: Because of rounding, sums of individual items may not equal 100. Dashes indicate no data.

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Table 17. Occupational earnings distribution: Los Angeles-Long Beach, Calif.—all machinery industries[1]

(Number and average straight-time hourly earnings[2] of production workers in selected occupations, November 1983)

Occupation[3]	Number of workers	Average hourly earnings	Percent of workers receiving straight-time hourly earnings (in dollars) of—																									
			Under 3.50	3.50 and under 3.75	3.75 - 4.00	4.00 - 4.25	4.25 - 4.50	4.50 - 4.75	4.75 - 5.00	5.00 - 5.50	5.50 - 6.00	6.00 - 6.50	6.50 - 7.00	7.00 - 7.50	7.50 - 8.00	8.00 - 8.50	8.50 - 9.00	9.00 - 9.50	9.50 - 10.00	10.00 - 10.50	10.50 - 11.00	11.00 - 11.50	11.50 - 12.00	12.00 - 13.00	13.00 - 14.00	14.00 - 15.00	15.00 - 16.00	16.00 - 17.00	17.00 and over
Machine-tool operators, production, class A	1,787	$12.71	-	-	-	-	-	-	-	-	-	-	-	-	(4)	1	1	1	2	7	5	9	5	14	34	8	6	6	-
Automatic-lathe operators	83	11.80	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	29	13	11	31	5	1	5	-	-
Drill-press operators, radial	136	11.82	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	42	1	-	4	6	38	4	3	-	-
Drill-press operators, single- or multiple-spindle	23	9.40	-	-	-	-	-	-	-	-	-	-	-	4	26	13	-	22	26	4	-	4	-	-	-	-	-	-	-
Engine-lathe operators	323	13.12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	6	10	6	2	16	34	-	5	17	-	-
Grinding-machine operators	284	12.92	-	-	-	-	-	-	-	-	-	-	-	-	-	1	5	(4)	3	6	13	4	6	31	10	19	-	-	-
Machine-tool operators, miscellaneous	631	13.10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(4)	2	4	(4)	10	5	16	38	16	-	9	-
Milling-machine operators	135	12.43	-	-	-	-	-	-	-	-	-	-	-	4	5	-	1	2	-	3	1	9	11	55	2	6	-	-	-
Screw-machine operators, automatic	25	11.57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16	4	24	4	-	28	-	4	4	16	-	-	-
Turret-lathe operators, hand	147	12.09	-	-	-	-	-	-	-	-	-	-	-	-	3	7	1	3	3	4	18	3	21	28	1	8	-	-	-
Machine-tool operators, production, class B	492	8.38	-	-	-	-	-	-	-	(4)	1	2	8	14	11	16	18	15	3	3	5	1	1	1	-	-	-	-	-
Engine-lathe operators	12	9.42	-	-	-	-	-	-	-	-	-	-	-	17	17	-	17	-	8	-	-	25	17	-	-	-	-	-	-
Grinding-machine operators	94	8.07	-	-	-	-	-	-	-	1	4	4	11	20	17	11	10	1	2	6	13	-	-	-	-	-	-	-	-
Machine-tool operators, miscellaneous	193	8.75	-	-	-	-	-	-	-	-	-	1	4	9	4	10	26	36	1	-	6	1	2	-	-	-	-	-	-
Milling-machine operators	43	8.88	-	-	-	-	-	-	-	-	-	-	2	7	5	28	29	5	-	19	-	2	-	5	-	-	-	-	-
Turret-lathe operators, hand	31	7.74	-	-	-	-	-	-	-	-	-	6	19	26	10	13	6	3	16	-	-	-	-	-	-	-	-	-	-
Machine-tool operators, production, class C:																													
Engine-lathe operators	6	6.71	-	-	-	-	-	-	-	-	17	17	33	-	33	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Machine-tool operators, miscellaneous	75	6.82	-	-	-	-	-	19	-	19	-	1	17	-	-	24	13	7	-	-	-	-	-	-	-	-	-	-	-
Turret-lathe operators, hand	20	5.72	-	-	-	-	-	-	-	35	50	5	-	-	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Machine-tool operators, production, numerically controlled, set up and operate	893	14.72	-	-	-	-	-	-	-	-	-	-	-	-	(4)	(4)	(4)	1	1	3	5	5	2	2	24	-	4	51	-
Automatic-lathe operators	55	11.15	-	-	-	-	-	-	-	-	-	-	-	-	2	5	2	2	-	-	36	15	18	13	7	-	-	-	-
Drill-press operators, radial	7	11.59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	29	-	-	29	43	-	-	-	-	-
Turret-lathe operators, hand	31	10.85	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	3	3	42	45	-	-	-	-	-	-	-
Machine-tool operators, production, numerically controlled, operate only	43	10.75	-	-	-	-	-	-	-	-	-	2	2	2	2	9	12	-	5	2	33	5	-	-	-	26	-	-	-
Milling-machine operators	8	8.03	-	-	-	-	-	-	-	-	-	-	13	13	-	25	50	-	-	-	-	-	-	-	-	-	-	-	-
Machine-tool operators, toolroom	292	11.67	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	1	10	7	9	14	13	12	15	12	2	2	-
Operates only one type of machine tool	171	12.46	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	12	4	4	18	1	8	26	20	4	4	-
Grinding-machine operators	106	12.62	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	1	-	16	1	-	36	15	6	6	-
Milling-machine operators	25	11.17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24	24	28	-	24	-	-	-	-	-
Operates more than one type of machine tool	121	11.03	-	-	-	-	-	-	-	-	-	-	-	-	-	2	5	2	7	10	17	8	31	19	-	-	-	-	-
Assemblers	4,427	7.41	-	-	9	6	3	7	2	7	5	8	5	7	2	2	5	2	7	4	5	1	1	2	4	(4)	1	-	-
Class A	1,374	10.15	-	-	-	-	-	-	-	5	2	1	1	3	1	4	15	13	2	4	16	5	2	6	14	(4)	3	-	-
Class B	1,109	7.29	-	-	4	-	(4)	8	1	11	6	8	14	12	3	2	2	(4)	18	12	-	-	-	-	-	-	-	-	-
Class C	1,944	5.54	-	-	17	13	6	11	5	7	7	13	2	6	1	-	(4)	3	8	-	-	-	-	-	-	-	-	-	-
Carpenters, maintenance	33	12.92	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	-	-	3	-	3	9	39	33	-	-	-
Electricians, maintenance	86	13.94	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	7	3	12	5	16	6	7	-	42	-

See footnotes at end of table.

Table 17. Occupational earnings distribution: Los Angeles-Long Beach, Calif.—all machinery industries[1]—Continued

(Number and average straight-time hourly earnings[2] of production workers in selected occupations, November 1983)

Occupation[3]	Number of workers	Average hourly earnings	Percent of workers receiving straight-time hourly earnings (in dollars) of—																									
			Under 3.50	3.50 and under 3.75	3.75 - 4.00	4.00 - 4.25	4.25 - 4.50	4.50 - 4.75	4.75 - 5.00	5.00 - 5.50	5.50 - 6.00	6.00 - 6.50	6.50 - 7.00	7.00 - 7.50	7.50 - 8.00	8.00 - 8.50	8.50 - 9.00	9.00 - 9.50	9.50 - 10.00	10.00 - 10.50	10.50 - 11.00	11.00 - 11.50	11.50 - 12.00	12.00 - 13.00	13.00 - 14.00	14.00 - 15.00	15.00 - 16.00	16.00 - 17.00	17.00 and over
Inspectors	1,571	$8.57	2	–	–	(4)	2	5	6	11	6	8	4	5	4	5	2	4	3	6	2	4	1	5	8	(4)	5	2	–
Class A	600	11.90	–	–	–	–	–	–	–	–	(4)	2	1	3	3	3	2	7	3	2	6	11	(4)	14	22	–	14	5	–
Class B	459	7.10	–	–	–	–	–	–	–	16	14	20	11	2	3	13	5	4	5	1	(4)	(4)	2	–	(4)	1	–	–	–
Class C	512	5.99	5	–	–	(4)	6	14	20	19	4	2	1	9	5	–	–	(4)	–	14	–	–	–	–	–	–	–	–	–
Janitors, porters, and cleaners	383	6.42	–	1	–	7	2	10	8	8	12	4	13	7	6	8	3	1	9	2	–	–	–	–	–	–	–	–	–
Laborers, material handling	97	8.45	–	–	–	–	2	–	–	12	–	–	3	2	41	2	–	4	2	–	–	31	–	–	–	–	–	–	–
Machinists, maintenance	24	11.16	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	54	–	13	21	–	13	–	–	–	–
Machinists, production	280	11.47	–	–	–	–	–	–	–	–	–	–	–	–	4	–	1	(4)	2	7	4	19	32	22	6	1	–	–	–
Mechanics, maintenance	272	12.09	–	–	–	–	–	–	–	–	–	–	–	–	–	–	(4)	10	9	11	8	17	7	4	4	14	6	10	–
Polishers and buffers, metal	164	9.64	–	–	–	–	–	–	–	–	–	3	4	4	5	4	35	12	1	11	7	–	–	–	7	–	4	4	–
Punch-press operators	335	7.66	–	–	–	–	–	–	5	4	13	23	–	12	(4)	–	3	8	12	20	–	–	–	–	–	–	–	–	–
Class A	144	9.69	–	–	–	–	–	–	–	–	–	–	–	–	–	–	7	19	28	47	–	–	–	–	–	–	–	–	–
Tool and die makers	608	14.38	–	–	–	–	–	–	–	–	–	–	–	–	–	–	(4)	2	–	2	2	10	3	12	9	10	17	17	[5] 16
Jobbing	481	14.90	–	–	–	–	–	–	–	–	–	–	–	–	–	–	(4)	3	–	(4)	2	7	2	9	7	10	19	21	20
Other than jobbing	127	12.43	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	9	3	24	6	22	18	11	8	–	–
Tool clerks	116	9.15	–	–	–	–	–	–	–	–	2	3	11	3	1	7	14	16	12	21	6	–	3	–	2	–	–	–	–
Welders, hand	818	11.24	–	–	–	–	–	–	–	–	–	–	–	–	1	3	2	13	13	7	6	19	1	8	21	(4)	(4)	4	–
Class A	687	11.60	–	–	–	–	–	–	–	–	–	–	–	–	1	1	2	8	13	8	5	21	2	10	25	(4)	(4)	5	–
Class B	131	9.30	–	–	–	–	–	–	–	–	–	–	–	–	6	18	2	41	9	2	13	9	–	–	–	–	–	–	–
Welders, machine	166	9.92	–	–	–	–	–	–	–	–	–	–	–	–	23	–	–	1	20	17	30	1	1	1	4	3	–	–	–
Class A	94	10.91	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	30	53	2	1	1	6	5	–	–	–

[1] The Los Angeles-Long Beach metropolitan area consists of Los Angeles County.

[2] Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

[3] Overall occupation may include data for subcategories not shown separately. Virtually all workers were time-workers.

[4] Less than 0.5 percent.

[5] Workers were distributed as follows: 5 percent at $17 and under $17.50; 2 percent at $17.50 and under $18; 8 percent at $18 and under $18.50; and 1 percent at $19 and under $19.50.

NOTE: Because of rounding, sums of individual items may not equal 100. Dashes indicate no data.

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Table 18. Occupational earnings distribution: Los Angeles-Long Beach, Calif.—special dies and tools and machine tool accessories[1]

(Number and average straight-time hourly earnings[2] of production workers in selected occupations, November 1983)

Occupation[3]	Number of workers	Average hourly earnings	Percent of workers receiving straight-time hourly earnings (in dollars) of—																									
			Under 4.50	4.50 and under 5.00	5.00 - 5.50	5.50 - 6.00	6.00 - 6.50	6.50 - 7.00	7.00 - 7.50	7.50 - 8.00	8.00 - 8.50	8.50 - 9.00	9.00 - 9.50	9.50 - 10.00	10.00 - 10.50	10.50 - 11.00	11.00 - 11.50	11.50 - 12.00	12.00 - 12.50	12.50 - 13.00	13.00 - 13.50	13.50 - 14.00	14.00 - 14.50	14.50 - 15.00	15.00 - 15.50	15.50 - 16.00	16.00 - 16.50	16.50 - 17.00	17.00 and over
Machine-tool operators, production, class A:																												
Milling-machine operators	13	$8.84	–	–	–	–	–	–	–	46	23	–	–	–	–	15	15	–	–	–	–	–	–	–	–	–	–	–
Machine-tool operators, production, class B	156	7.79	–	–	1	3	6	16	22	12	8	13	13	1	4	1	–	–	–	–	–	–	–	–	–	–	–	–
Grinding-machine operators	66	7.79	–	–	2	6	6	14	12	21	12	14	2	–	9	3	–	–	–	–	–	–	–	–	–	–	–	–
Machine-tool operators, miscellaneous	51	8.13	–	–	–	–	2	16	25	2	2	18	35	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Machine-tool operators, production, class C	156	5.68	[4] 24	19	12	14	4	1	4	3	12	6	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Machine-tool operators, production, numerically controlled, set up and operate	16	9.52	–	–	–	–	–	–	–	6	19	13	13	13	6	6	25	–	–	–	–	–	–	–	–	–	–	–
Automatic-lathe operators	10	9.42	–	–	–	–	–	–	–	10	30	10	10	–	–	–	40	–	–	–	–	–	–	–	–	–	–	–
Machine-tool operators, toolroom	201	11.90	–	–	–	–	–	–	–	–	1	3	2	7	9	11	6	15	7	6	6	3	17	–	3	–	3	–	–
Operates only one type of machine tool	106	12.81	–	–	–	–	–	–	–	–	1	–	2	8	6	6	6	–	1	11	11	6	32	–	6	–	6	–	–
Grinding-machine operators	48	13.42	–	–	–	–	–	–	–	–	–	–	–	17	–	–	–	–	–	–	25	–	33	–	13	–	13	–	–
Operates more than one type of machine tool	95	10.89	–	–	–	–	–	–	–	–	2	6	2	6	13	18	6	32	15	–	–	–	–	–	–	–	–	–	–
Assemblers	30	8.15	–	–	–	17	–	17	17	3	–	–	13	13	13	7	–	–	–	–	–	–	–	–	–	–	–	–	–
Class A	20	9.17	–	–	–	–	–	–	25	5	–	–	20	20	20	10	–	–	–	–	–	–	–	–	–	–	–	–	–
Inspectors	49	7.83	6	8	14	–	8	2	2	14	14	–	2	4	–	4	8	4	4	4	–	–	–	–	–	–	–	–	–
Class A	23	9.41	–	–	–	–	17	–	–	–	30	–	–	9	–	9	17	–	9	9	–	–	–	–	–	–	–	–	–
Class B	16	7.31	–	–	38	–	–	–	6	38	–	–	6	–	–	–	–	13	–	–	–	–	–	–	–	–	–	–	–
Janitors, porters, and cleaners	65	5.57	[5] 32	3	14	15	5	3	3	22	3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Tool and die makers	398	14.49	–	–	–	–	–	–	–	–	–	[6]	3	–	[6]	3	8	3	8	3	4	5	11	1	14	6	4	4	[7] 24
Jobbing	396	14.51	–	–	–	–	–	–	–	–	–	[6]	3	–	[6]	2	8	3	8	3	4	5	11	1	14	6	4	4	24
Tool clerks	13	7.42	–	–	–	15	–	–	31	8	46	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Welders, hand	98	11.86	–	–	–	–	–	–	–	–	–	–	8	4	10	10	–	4	16	2	43	–	2	–	–	–	–	–	–

[1] The Los Angeles-Long Beach metropolitan area consists of Los Angeles County. Data relate to workers in establishments primarily manufacturing special dies and tools, die sets, jigs and fixtures; or machine-tool accessories and measuring devices.

[2] Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

[3] Overall occupation may include data for subcategories not shown separately. Virtually all workers were time-workers.

[4] Workers were distributed as follows: 10 percent at $3.50 and under $4; and 14 percent at $4 and under $4.50.

[5] All workers were at $4 and under $4.50.

[6] Less than 0.5 percent.

[7] Workers were distributed as follows: 7 percent at $17 and under $17.50; 4 percent at $17.50 and under $18; 12 percent at $18 and under $18.50; and 1 percent at $19 and under $19.50.

NOTE: Because of rounding, sums of individual items may not equal 100. Dashes indicate no data.

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Table 19. Occupational earnings distribution: Los Angeles-Long Beach, Calif.—oil field machinery[1]

(Number and average straight-time hourly earnings[2] of production workers in selected occupations, November 1983)

Occupation[3]	Number of workers	Average hourly earnings	Percent of workers receiving straight-time hourly earnings (in dollars) of—																
			6.00 and under 6.50	6.50 - 7.00	7.00 - 7.50	7.50 - 8.00	8.00 - 8.50	8.50 - 9.00	9.00 - 9.50	9.50 - 10.00	10.00 - 10.50	10.50 - 11.00	11.00 - 11.50	11.50 - 12.00	12.00 - 12.50	12.50 - 13.00	13.00 - 13.50	13.50 - 14.00	14.00 - 14.50	14.50 - 15.00	15.00 and under 15.50
Machine-tool operators, production, class A	149	$11.62	–	–	–	–	–	–	–	–	5	15	44	14	1	12	–	9	–	–	–
Grinding-machine operators	51	11.20	–	–	–	–	–	–	–	–	–	33	43	24	–	–	–	–	–	–	–
Milling-machine operators	13	13.05	–	–	–	–	–	–	–	–	–	15	–	–	–	23	–	62	–	–	–
Turret-lathe operators, hand	23	11.55	–	–	–	–	–	–	–	–	–	–	87	–	–	13	–	–	–	–	–
Machine-tool operators, production, class B	22	10.96	–	–	–	–	–	9	9	5	9	9	9	32	18	–	–	–	–	–	–
Drill-press operators, radial	7	10.53	–	–	–	–	–	29	–	–	29	–	–	14	29	–	–	–	–	–	–
Machine-tool operators, production, numerically controlled, set up and operate	68	11.46	–	–	–	–	–	–	4	1	7	4	50	15	7	4	–	6	–	–	–
Assemblers	27	10.36	–	–	4	–	–	15	7	–	30	7	33	–	4	–	–	–	–	–	–
Class A	17	11.04	–	–	–	–	–	–	–	–	29	12	53	–	6	–	–	–	–	–	–
Inspectors	48	11.12	–	–	–	–	–	–	–	–	8	33	40	19	–	–	–	–	–	–	–
Class A	35	11.08	–	–	–	–	–	–	–	–	3	43	54	–	–	–	–	–	–	–	–
Janitors, porters, and cleaners	16	8.48	13	6	–	13	6	13	19	31	–	–	–	–	–	–	–	–	–	–	–
Mechanics, maintenance	25	11.85	–	–	–	–	–	–	–	–	–	–	60	16	8	8	–	–	–	8	–
Tool and die makers:																					
Other than jobbing	10	13.19	–	–	–	–	–	–	–	–	–	–	–	–	30	10	30	20	–	–	10
Tool clerks	16	10.58	–	–	–	–	–	6	–	25	6	38	–	25	–	–	–	–	–	–	–
Welders, hand	40	11.13	–	–	–	–	–	–	2	–	5	30	45	10	7	–	–	–	–	–	–
Class A	22	11.18	–	–	–	–	–	–	5	–	9	27	27	18	14	–	–	–	–	–	–

[1] The Los Angeles-Long Beach metropolitan area consists of Los Angeles County. Data relate to workers in establishments primarily manufacturing machinery and equipment for use in oil and gas fields, or for drilling water wells.

[2] Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

[3] Overall occupation may include data for subcategories not shown separately. Virtually all workers were time-workers.

NOTE: Because of rounding, sums of individual items may not equal 100. Dashes indicate no data.

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Table 20. Occupational earnings distribution: Milwaukee, Wis.—all machinery industries[1]

(Number and average straight-time hourly earnings[2] of production workers in selected occupations, November 1983)

Occupation and method of wage payment[3]	Number of workers	Average hourly earnings	Percent of workers receiving straight-time hourly earnings (in dollars) of—																			
			Under 7.00	7.00 - 7.25	$7.25 - $7.50	7.50 - 8.00	8.00 - 8.50	8.50 - 9.00	9.00 - 9.50	9.50 - 10.00	10.00 - 10.50	10.50 - 11.00	11.00 - 11.50	11.50 - 12.00	12.00 - 12.50	12.50 - 13.00	13.00 - 13.50	13.50 - 14.00	14.00 - 14.50	14.50 - 15.00	15.00 - 15.50	15.50 - 16.00	16.00 and over
Machine-tool operators, production, class A	1,896	$11.71	-	-	-	-	(*)	(*)	14	10	1	4	9	18	18	9	4	2	2	3	2	1	2
Time	1,077	10.88	-	-	-	-	-	(*)	22	15	1	5	11	26	14	6	(*)	-	-	-	-	-	-
Incentive	819	12.80	-	-	-	-	(*)	1	3	3	2	4	6	6	22	13	10	5	6	6	5	3	4
Automatic-lathe operators	239	11.81	-	-	-	-	-	3	6	15	3	3	13	19	12	3	3	5	6	5	2	-	3
Time	85	11.12	-	-	-	-	-	-	-	19	1	2	28	45	-	5	-	-	-	-	-	-	-
Incentive	154	12.19	-	-	-	-	-	4	9	13	4	4	5	5	19	1	4	7	9	8	3	-	5
Drill-press operators, radial	75	11.75	-	-	-	-	-	-	1	11	1	45	1	4	12	3	1	1	9	3	1	-	6
Time	47	10.78	-	-	-	-	-	-	-	17	-	68	-	6	9	-	-	-	-	-	-	-	-
Incentive	28	13.38	-	-	-	-	-	-	4	-	4	7	4	-	18	7	4	4	25	7	4	-	14
Drill-press operators, single- or multiple-spindle	59	11.74	-	-	-	-	-	-	-	2	-	27	14	-	47	3	-	7	-	-	-	-	-
Incentive	41	12.22	-	-	-	-	-	-	-	-	-	-	20	-	68	2	-	10	-	-	-	-	-
Engine-lathe operators	141	11.35	-	-	-	-	-	-	6	20	1	4	18	24	3	21	3	1	-	-	-	-	1
Time	98	10.64	-	-	-	-	-	-	8	29	1	-	24	33	-	6	-	-	-	-	-	-	-
Incentive	43	12.51	-	-	-	-	-	-	-	-	-	12	2	5	9	56	9	2	-	-	-	-	2
Grinding-machine operators	445	11.02	-	-	-	-	-	-	40	10	4	2	6	12	5	5	2	2	2	3	3	3	1
Incentive	141	13.20	-	-	-	-	-	-	1	2	6	7	7	3	14	6	8	6	6	11	9	11	4
Machine-tool operators, miscellaneous	575	12.05	-	-	-	-	-	(*)	10	7	-	1	4	13	36	13	4	2	2	2	3	1	1
Time	347	11.41	-	-	-	-	-	(*)	14	10	-	1	5	19	41	9	1	-	-	-	-	-	-
Incentive	228	13.03	-	-	-	-	-	-	3	1	-	1	4	5	27	18	10	5	6	6	7	4	3
Milling-machine operators	106	11.31	-	-	-	-	1	2	1	30	-	4	15	23	6	9	2	2	1	3	2	-	1
Time	72	10.90	-	-	-	-	-	-	-	43	-	-	17	33	-	6	1	-	-	-	-	-	-
Incentive	34	12.17	-	-	-	-	3	6	3	3	-	12	12	-	18	15	3	6	3	9	6	-	3
Screw-machine operators, automatic	68	12.33	-	-	-	-	-	-	-	-	-	-	1	49	15	6	29	-	-	-	-	-	-
Incentive	41	12.76	-	-	-	-	-	-	-	-	-	-	2	22	24	2	49	-	-	-	-	-	-
Turret-lathe operators, hand	188	12.40	-	-	-	-	-	-	-	-	-	-	18	38	11	14	7	3	2	3	3	2	2
Incentive	109	12.94	-	-	-	-	-	-	-	-	-	-	9	17	18	18	13	5	3	8	5	4	3
Machine-tool operators, production, class B	610	11.37	-	(*)	-	(*)	2	21	5	1	3	9	5	9	17	9	4	5	5	4	2	(*)	(*)
Time	292	10.07	-	(*)	-	(*)	3	44	9	1	3	11	-	5	17	7	-	-	-	-	-	-	-
Incentive	318	12.56	-	-	-	-	1	1	1	2	3	6	9	12	18	11	7	9	9	7	3	1	1
Automatic-lathe operators	34	11.81	-	-	-	3	-	18	-	3	3	-	-	12	9	36	-	3	12	3	-	-	-
Time	13	10.27	-	-	-	8	-	46	-	8	-	-	-	-	-	38	-	-	-	-	-	-	-
Drill-press operators, radial	54	11.89	-	-	-	-	-	-	17	-	-	15	-	17	35	4	2	2	4	-	2	-	4
Time	33	11.22	-	-	-	-	-	-	27	-	-	24	-	-	48	-	-	-	-	-	-	-	-
Drill-press operators, single- or multiple-spindle	103	12.12	-	1	-	-	4	9	2	-	-	8	17	7	17	2	3	7	11	12	1	1	-
Time	33	10.30	-	3	-	-	12	27	-	-	-	24	-	12	21	-	-	-	-	-	-	-	-
Incentive	70	12.98	-	-	-	-	-	-	3	-	-	-	24	4	18	3	4	10	18	17	1	1	-
Engine-lathe operators	66	10.83	-	-	-	-	-	42	12	-	5	-	5	6	8	2	6	14	-	3	-	-	-
Incentive	29	12.69	-	-	-	-	-	-	-	-	10	-	10	10	14	3	14	31	-	7	-	-	-
Machine-tool operators, miscellaneous	146	11.99	-	-	-	-	1	3	-	3	7	19	5	16	9	11	5	4	6	3	5	1	-
Time	49	10.87	-	-	-	-	4	10	-	2	16	24	-	22	14	6	-	-	-	-	-	-	-
Incentive	97	12.56	-	-	-	-	-	-	-	3	2	16	8	12	6	13	8	6	9	5	8	1	-
Milling-machine operators	88	11.26	-	-	-	-	7	7	11	5	3	5	2	2	42	11	2	-	-	-	1	1	-
Time	37	10.85	-	-	-	-	11	11	22	-	-	-	-	-	35	22	-	-	-	-	-	-	-
Incentive	51	11.56	-	-	-	-	4	4	4	8	6	8	4	4	47	4	4	-	-	-	2	2	-
Turret-lathe operators, hand	18	12.68	-	-	-	-	-	11	-	-	-	-	-	6	11	22	17	22	6	6	-	-	-
Incentive	16	13.15	-	-	-	-	-	-	-	-	-	-	-	6	13	25	19	25	6	6	-	-	-
Machine-tool operators, production, class C	194	10.22	1	-	-	1	3	22	8	8	27	4	9	3	6	3	2	2	1	2	-	-	-
Time	89	9.43	1	-	-	3	1	46	-	-	41	-	-	-	6	-	-	-	-	-	-	-	-
Machine-tool operators, miscellaneous[5]	44	10.88	-	-	-	-	-	-	14	14	14	5	27	11	7	9	-	-	-	-	-	-	-

See footnotes at end of table.

Table 20. Occupational earnings distribution: Milwaukee, Wis.—all machinery industries[1]—Continued

(Number and average straight-time hourly earnings[2] of production workers in selected occupations, November 1983)

Occupation and method of wage payment[3]	Number of workers	Average hourly earnings	Percent of workers receiving straight-time hourly earnings (in dollars) of—																				
			Under 7.00	7.00 - 7.25	$7.25 - $7.50	7.50 - 8.00	8.00 - 8.50	8.50 - 9.00	9.00 - 9.50	9.50 - 10.00	10.00 - 10.50	10.50 - 11.00	11.00 - 11.50	11.50 - 12.00	12.00 - 12.50	12.50 - 13.00	13.00 - 13.50	13.50 - 14.00	14.00 - 14.50	14.50 - 15.00	15.00 - 15.50	15.50 - 16.00	16.00 and over
Machine-tool operators, production, numerically controlled, set up and operate	277	$12.06	-	-	-	-	-	4	-	2	4	9	20	15	12	6	5	9	1	7	2	1	(*)
Time	108	11.06	-	-	-	-	-	11	-	-	7	18	30	22	-	14	-	-	-	-	-	-	-
Incentive	169	12.70	-	-	-	-	-	-	-	4	2	5	14	11	20	1	9	15	2	12	4	1	1
Automatic-lathe operators	103	12.02	-	-	-	-	-	8	-	-	3	3	32	13	14	-	4	9	3	13	-	-	-
Drill-press operators, single- or multiple-spindle	41	13.47	-	-	-	-	-	-	-	-	-	-	10	10	15	2	7	24	-	17	10	5	-
Engine-lathe operators	14	12.43	-	-	-	-	-	-	-	-	7	-	-	14	36	-	36	7	-	-	-	-	-
Machine-tool operators, toolroom	276	11.16	-	-	-	14	-	1	5	3	7	15	9	9	7	11	5	9	6	-	-	-	-
Time	262	11.07	-	-	-	15	-	1	5	3	7	16	8	9	7	11	3	10	5	-	-	-	-
Operates only one type of machine tool[4]	137	11.89	-	-	-	-	-	-	10	6	1	27	2	11	1	1	10	19	12	-	-	-	-
Time	123	11.79	-	-	-	-	-	-	11	7	-	30	-	12	2	-	7	21	11	-	-	-	-
Grinding-machine operators	68	10.86	-	-	-	-	-	-	21	12	1	25	4	22	3	1	9	-	1	-	-	-	-
Time	56	10.49	-	-	-	-	-	-	25	14	-	30	-	27	4	-	-	-	-	-	-	-	-
Operates more than one type of machine tool	139	12.44	-	-	-	28	-	1	-	-	14	5	16	6	12	20	-	-	-	-	-	-	-
Assemblers	1,877	11.12	(*)	-	(*)	1	3	5	7	5	5	26	9	8	13	12	1	2	2	1	(*)	(*)	(*)
Time	883	10.54	(*)	-	(*)	3	5	8	10	4	(*)	46	3	8	7	6	-	-	-	-	-	-	-
Incentive	994	11.64	-	-	-	-	2	3	5	6	9	7	12	9	18	16	3	3	3	3	(*)	1	(*)
Class A	992	11.45	-	-	-	-	-	2	4	3	7	35	3	8	22	9	2	1	2	1	(*)	1	(*)
Time	622	11.00	-	-	-	-	-	4	7	5	-	55	4	9	9	9	-	-	-	-	-	-	-
Incentive	370	12.22	-	-	-	-	-	-	-	-	18	-	2	7	45	9	4	3	5	4	(*)	2	(*)
Class B	543	10.76	(*)	-	(*)	5	9	11	8	5	1	15	5	11	3	22	1	1	1	2	(*)	(*)	(*)
Time	207	9.49	(*)	-	(*)	12	22	20	-	1	1	29	-	9	4	-	-	-	-	-	-	-	-
Incentive	336	11.54	-	-	-	-	1	5	14	7	2	6	8	12	2	35	1	2	1	3	1	1	1
Carpenters, maintenance	16	11.97	-	-	-	-	-	-	-	-	19	13	19	19	-	13	-	6	-	-	-	6	6
Electricians, maintenance	171	12.77	-	-	-	-	-	-	-	-	2	-	7	11	12	37	12	10	1	4	-	1	3
Time	144	12.57	-	-	-	-	-	-	-	-	3	-	8	4	14	44	15	12	-	-	-	-	-
Inspectors	453	11.46	-	-	-	-	-	-	5	8	5	20	10	17	19	7	6	(*)	1	(*)	1	-	-
Time	401	11.32	-	-	-	-	-	-	5	8	5	22	10	18	21	6	4	-	-	-	-	-	-
Incentive	52	12.55	-	-	-	-	-	-	-	10	6	2	13	8	2	15	19	2	12	4	8	-	-
Class A	228	11.82	-	-	-	-	-	-	-	4	3	21	7	19	23	11	12	(*)	-	-	-	-	-
Time	200	11.74	-	-	-	-	-	-	-	4	3	23	4	20	26	10	9	-	-	-	-	-	-
Incentive	28	12.38	-	-	-	-	-	-	-	-	4	-	25	11	4	21	32	4	-	-	-	-	-
Class B	171	10.92	-	-	-	-	-	-	11	17	2	25	6	20	18	2	1	-	-	-	-	-	-
Time	161	10.92	-	-	-	-	-	-	11	15	1	26	6	21	19	1	-	-	-	-	-	-	-
Incentive	10	10.90	-	-	-	-	-	-	-	50	10	-	-	10	-	20	10	-	-	-	-	-	-
Janitors, porters, and cleaners	191	8.45	7 20	1	-	9	22	9	3	13	12	4	4	-	4	1	-	1	-	-	-	-	-
Time	174	8.14	22	1	-	10	24	10	3	14	13	-	4	-	-	-	-	-	-	-	-	-	-
Laborers, material handling	408	10.51	(*)	(*)	(*)	-	(*)	2	6	12	5	63	7	2	2	-	-	-	-	-	-	-	-
Time	309	10.53	(*)	(*)	(*)	-	(*)	(*)	b	10	1	75	5	3	-	-	-	-	-	-	-	-	-
Mechanics, maintenance	269	12.01	-	-	-	-	(*)	(*)	-	1	9	9	10	20	9	25	6	6	1	-	1	1	1
Time	247	11.90	-	-	-	-	(*)	(*)	-	1	10	10	11	17	10	27	9	6	-	-	-	-	-
Punch-press operators	311	10.84	-	5	-	1	4	5	-	(*)	-	18	24	14	23	(*)	(*)	(*)	(*)	(*)	-	-	-
Class A	234	11.18	-	6	-	-	3	7	-	(*)	-	5	29	17	31	(*)	(*)	-	(*)	(*)	-	-	-
Setup workers, machine tools	58	11.92	-	-	-	-	2	-	14	-	-	2	10	22	10	12	26	2	-	-	-	-	-
Time	34	11.10	-	-	-	-	3	-	24	-	-	3	18	35	-	18	-	-	-	-	-	-	-
Conventional machines	40	11.32	-	-	-	-	2	-	20	-	-	2	15	32	7	17	-	2	-	-	-	-	-
Time	34	11.10	-	-	-	-	3	-	24	-	-	3	18	35	-	18	-	-	-	-	-	-	-
Tool and die makers	495	12.41	-	-	-	-	1	-	-	-	13	3	5	5	20	21	5	4	19	2	-	(*)	-
Jobbing[5]	292	12.41	-	-	-	-	2	-	-	-	16	2	7	7	11	16	3	3	29	3	-	-	-
Other than jobbing[6]	203	12.40	-	-	-	-	-	-	-	-	10	3	2	3	33	29	9	6	4	-	-	(*)	-
Tool clerks	37	10.95	-	-	-	-	-	-	11	5	22	11	22	16	14	-	-	-	-	-	-	-	-
Time	35	10.93	-	-	-	-	-	-	11	6	20	11	23	17	11	-	-	-	-	-	-	-	-

See footnotes at end of table.

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Table 20. Occupational earnings distribution: Milwaukee, Wis.—all machinery industries[1]—Continued

(Number and average straight-time hourly earnings[2] of production workers in selected occupations, November 1983)

Occupation and method of wage payment[3]	Number of workers	Average hourly earnings	Percent of workers receiving straight-time hourly earnings (in dollars) of—																			
			Under 7.00	7.00 - 7.25	$7.25 - $7.50	7.50 - 8.00	8.00 - 8.50	8.50 - 9.00	9.00 - 9.50	9.50 - 10.00	10.00 - 10.50	10.50 - 11.00	11.00 - 11.50	11.50 - 12.00	12.00 - 12.50	12.50 - 13.00	13.00 - 13.50	13.50 - 14.00	14.00 - 14.50	14.50 - 15.00	15.00 - 15.50	15.50 - 16.00	16.00 and over
Welders, hand	789	$11.41	(4)	-	3	1	3	10	5	18	1	2	4	7	11	7	6	8	4	3	3	2	2
Time	357	9.30	(4)	-	6	3	8	23	10	39	1	1	-	5	1	2	-	-	-	-	-	-	-
Incentive	432	13.15	-	-	-	-	-	-	-	1	1	3	6	8	19	11	12	14	7	6	5	4	3
Class A	448	11.59	-	-	-	-	3	5	(5)	29	2	1	2	7	13	8	7	6	4	4	3	2	2
Time	212	9.74	-	-	-	-	-	-	(5)	61	2	2	-	8	1	8	-	-	-	-	-	-	-
Incentive	236	13.26	-	-	-	-	11	11	-	-	2	1	5	8	23	3	13	12	7	6	5	4	3
Class B	341	11.16	(4)	-	7	-	-	-	10	4	1	(6)	5	6	9	13	7	10	-	-	-	-	-
Time	145	8.66	1	-	16	3	1	17	24	6	-	-	5	6	1	5	6	-	7	4	6	4	3
Incentive	196	13.01	-	-	-	8	2	41	-	2	1	-	9	1	10	-	-	17	-	2	3	2	1
															15	9	10		8	-	5	-	-
																				4			3

[1] The Milwaukee metropolitan area consists of Milwaukee, Ozaukee, Washington and Waukesha Counties.
[2] Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.
[3] Overall occupation may include data for subcategories not shown separately. Unless otherwise indicated, virtually all workers were timeworkers.
[4] Less than 0.5 percent.
[5] Virtually all incentive workers.
[6] Virtually all timeworkers.
[7] Workers were distributed as follows: 12 percent at $5.50 and under $5.75; and 8 percent at under $5.50.

NOTE: Because of rounding, sums of individual items may not equal 100. Dashes indicate no data.

Table 21. Occupational earnings distribution: Milwaukee, Wis.—farm and construction machinery[1]

(Number and average straight-time hourly earnings[2] of production workers in selected occupations, November 1983)

Occupation and method of wage payment[3]	Number of workers	Average hourly earnings	Percent of workers receiving straight-time hourly earnings (in dollars) of—																									
			Under 6.50	6.50 and under 6.75	6.75 - 7.00	7.00 - 7.25	7.25 - 7.50	7.50 - 7.75	7.75 - 8.00	8.00 - 8.25	8.25 - 8.50	8.50 - 8.75	8.75 - 9.00	9.00 - 9.25	$9.25 - $9.50	9.50 - 10.00	10.00 - 10.50	10.50 - 11.00	11.00 - 11.50	11.50 - 12.00	12.00 - 12.50	12.50 - 13.00	13.00 - 13.50	13.50 - 14.00	14.00 - 14.50	14.50 - 15.00	15.00 - 15.50	15.50 - 16.00	16.00 and over
Machine-tool operators, production, class A	198	$13.28	-	-	-	-	-	-	-	-	-	1	-	-	-	1	1	3	-	3	30	18	9	6	7	7	9	6	2
Time	11	10.48	-	-	-	-	-	-	-	-	-	9	-	-	-	9	18	55	-	9	-	-	-	-	-	-	-	-	-
Incentive	187	13.44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	32	19	9	6	7	7	10	6	2
Machine-tool operators, miscellaneous	117	13.19	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	2	-	3	36	18	7	3	7	4	10	6	1
Machine-tool operators, production, class B	138	11.47	-	-	-	1	-	1	-	-	7	14	9	2	-	1	-	-	-	17	8	14	7	6	3	4	2	1	1
Automatic-lathe operators	18	10.83	-	-	-	-	-	6	-	-	-	-	33	-	-	6	-	-	-	17	11	22	-	6	-	-	-	-	-
Milling-machine operators	14	10.66	-	-	-	-	-	-	-	-	29	29	-	-	-	-	-	-	-	14	-	7	7	-	-	-	7	7	-
Machine-tool operators, production, class C	9	9.39	-	11	11	-	-	-	22	-	11	-	-	-	-	-	-	-	33	-	-	11	-	-	-	-	-	-	-
Machine-tool operators, production, numerically controlled, set up and operate	47	12.59	-	-	-	-	-	-	-	-	-	-	26	-	-	-	-	2	-	2	4	2	15	28	-	2	13	4	2
Incentive	34	13.95	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	6	3	21	38	-	3	18	6	3
Assemblers	276	10.93	(4)	1	-	-	(4)	1	-	(4)	17	3	1	(4)	3	2	3	11	13	22	13	1	(4)	1	1	1	1	1	1
Time	105	9.01	1	3	-	-	1	2	-	1	44	9	2	1	8	5	4	21	-	-	-	-	-	-	-	-	-	-	-
Incentive	171	12.10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	4	22	36	22	2	1	2	2	2	1	2	2
Class A																													
Time	24	9.68	-	-	-	-	-	-	-	-	-	33	-	4	25	-	-	38	-	-	-	-	-	-	-	-	-	-	-
Class B	129	10.35	1	1	-	-	1	2	-	-	36	-	2	-	-	-	5	15	3	24	2	1	1	2	-	2	2	2	2
Incentive	62	12.11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	11	6	50	3	2	2	5	-	5	3	3	3
Inspectors	61	12.10	-	-	-	-	-	-	-	-	-	-	-	-	10	3	10	-	7	2	2	34	31	2	-	-	-	-	-
Time	41	11.66	-	-	-	-	-	-	-	-	-	-	-	-	15	5	15	-	10	-	2	32	22	-	-	-	-	-	-
Class A	42	12.62	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	-	10	-	-	36	43	2	-	-	-	-	-
Time	26	12.30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	-	15	-	-	35	35	-	-	-	-	-	-
Janitors, porters, and cleaners	22	10.55	-	-	-	5	-	-	27	-	-	-	-	-	-	5	-	-	18	-	36	5	-	5	-	-	-	-	-
Time	12	9.08	-	-	-	8	-	-	50	-	-	-	-	-	-	8	-	-	33	-	-	-	-	-	-	-	-	-	-
Laborers, material handling	11	9.73	-	-	9	9	9	-	-	9	-	9	-	-	-	-	18	-	-	9	27	-	-	-	-	-	-	-	-
Time	8	8.75	-	-	13	13	13	-	-	13	-	13	-	-	-	-	25	-	-	13	-	-	-	-	-	-	-	-	-
Mechanics, maintenance	39	13.36	-	-	-	-	-	-	-	-	3	-	3	-	-	-	-	-	15	-	-	-	15	38	10	-	5	5	5
Time	29	12.72	-	-	-	-	-	-	-	-	3	-	3	-	-	-	-	-	21	-	-	-	21	52	-	-	-	-	-
Punch-press operators	49	10.24	-	-	-	-	-	4	-	2	8	-	33	-	-	2	-	6	12	27	2	-	2	-	2	-	-	-	-
Class A	27	9.99	-	-	-	-	-	-	-	4	-	-	59	-	-	4	-	-	-	26	-	-	4	-	4	-	-	-	-
Class B	22	10.54	-	-	-	-	-	9	-	-	18	-	-	-	-	-	-	14	27	27	5	-	-	-	-	-	-	-	-
Setup workers, machine tools																													
Conventional machines	20	10.61	-	-	-	-	-	-	-	5	-	-	-	40	-	-	-	5	20	5	15	5	-	5	-	-	-	-	-
Time	14	9.77	-	-	-	-	-	-	-	7	-	-	-	57	-	-	-	7	29	-	-	-	-	-	-	-	-	-	-
Tool and die makers																													
Other than jobbing[5]	41	12.33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	15	12	-	-	-	-	32	20	-	-	2	-
Tool clerks	8	11.92	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	63	38	-	-	-	-	-	-	-	-
Welders, hand	306	12.45	-	-	(4)	-	-	2	2	1	1	15	2	1	-	1	2	2	1	1	15	5	7	11	8	7	7	6	4
Time	83	8.76	-	-	1	-	-	6	7	2	2	55	6	5	-	4	6	5	-	-	-	-	-	-	-	-	-	-	-
Incentive	223	13.82	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(4)	(4)	1	1	21	7	9	16	11	9	9	8	6
Class A	144	13.43	-	-	-	-	-	-	-	1	-	-	-	1	-	1	3	3	-	-	26	8	8	10	8	9	9	7	6
Time	13	10.01	-	-	-	-	-	-	-	8	-	-	-	8	-	15	38	31	-	-	-	-	-	-	-	-	-	-	-
Incentive	131	13.77	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	29	8	9	11	8	10	10	8	6
Class B	162	11.58	-	-	1	-	-	3	4	1	1	28	3	2	-	1	1	1	2	2	6	3	5	12	8	5	5	5	3
Welders, machine	43	10.90	-	-	-	-	-	-	-	-	19	-	-	-	-	2	9	51	2	5	-	-	-	-	-	2	2	7	-
Class B	16	9.61	-	-	-	-	-	-	-	-	50	-	-	-	-	6	25	-	6	13	-	-	-	-	-	-	-	-	-

[1] The Milwaukee metropolitan area consists of Milwaukee, Ozaukee, Washington, and Waukesha Counties. Data relate to workers in establishments primarily manufacturing farm and garden machinery and equipment, or construction machinery and equipment.

[2] Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

[3] Overall occupation may include data for subcategories not shown separately. Unless otherwise indicated, virtually all workers were timeworkers.

[4] Less than 0.5 percent.

[5] Virtually all timeworkers.

NOTE: Because of rounding, sums of individual items may not equal 100. Dashes indicate no data.

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Table 22. Occupational earnings distribution: Minneapolis-St. Paul, Minn.-Wis.—all machinery industries[1]

(Number and average straight-time hourly earnings[2] of production workers in selected occupations, November 1983)

Occupation[3]	Number of workers	Average hourly earnings	Percent of workers receiving straight-time hourly earnings (in dollars) of—																								
			Under 6.50	6.50 and under 6.75	6.75 - 7.00	7.00 - 7.25	7.25 - 7.50	7.50 - 7.75	7.75 - 8.00	8.00 - 8.25	8.25 - 8.50	8.50 - 8.75	8.75 - 9.00	9.00 - 9.25	9.25 - 9.50	9.50 - 9.75	9.75 - 10.00	10.00 - 10.25	10.25 - 10.50	10.50 - 11.00	11.00 - 11.50	11.50 - 12.00	12.00 - 12.50	12.50 - 13.00	13.00 - 13.50	13.50 - 14.00	14.00 - 14.50	14.50 and under 15.00
Machine-tool operators, production, class A	851	$10.77	-	-	-	-	-	-	-	-	-	2	-	-	4	-	3	2	21	35	17	14	1	1	-	-	-	-
Automatic-lathe operators	47	10.66	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	26	32	28	9	-	-	5	-	-	-	-
Drill-press operators, single- or multiple-spindle	133	10.47	-	-	-	-	-	-	-	-	-	10	-	-	-	-	20	5	14	8	43	-	-	-	-	-	-	-
Grinding-machine operators	74	10.86	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23	39	36	-	-	1	-	-	-	-
Machine-tool operators, miscellaneous	235	10.90	-	-	-	-	-	-	-	-	-	-	-	-	13	-	-	-	3	42	4	39	-	-	-	-	-	-
Milling-machine operators	57	10.62	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	28	63	5	-	-	-	-	-	-	-
Turret-lathe operators, hand	117	10.91	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	54	30	-	9	-	-	-	-	-
Machine-tool operators, production, class B	740	9.66	-	-	-	1	2	1	4	2	7	(4)	2	7	4	7	24	7	11	15	2	1	-	-	-	-	-	-
Drill-press operators, single- or multiple-spindle	89	9.74	-	-	-	-	-	-	-	-	-	3	-	9	-	57	-	14	17	-	-	-	-	-	-	-	-	-
Machine-tool operators, miscellaneous	218	9.01	-	-	-	4	8	4	12	-	17	-	-	13	-	-	17	4	6	10	4	-	-	-	-	-	-	-
Milling-machine operators	83	10.44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	47	-	-	47	6	-	-	-	-	-	-	-
Machine-tool operators, production, class C	335	8.54	8	8	3	11	5	11	3	-	-	3	-	-	-	-	2	47	-	-	-	-	-	-	-	-	-	-
Machine-tool operators, production, numerically controlled, set up and operate	342	10.58	-	-	-	-	-	-	-	-	3	3	3	-	-	-	8	6	18	36	5	13	(4)	6	-	-	-	-
Automatic-lathe operators	55	11.41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	33	16	-	-	40	-	-	-	-
Drill-press operators, single- or multiple-spindle	41	10.50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	48	17	12	-	15	2	-	-	-	-	-
Machine-tool operators, toolroom	254	10.75	-	-	-	-	-	-	-	-	-	4	2	4	4	6	7	5	5	31	9	-	7	8	8	-	-	-
Operates only one type of machine tool	21	12.03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19	-	-	-	-	29	29	24	-	-	-
Operates more than one type of machine tool	233	10.64	-	-	-	-	-	-	-	-	-	4	2	4	4	6	8	4	6	33	9	-	5	6	7	-	-	-
Assemblers	4,560	9.20	1	(4)	1	6	1	1	3	5	4	16	1	9	16	2	11	9	3	4	5	1	-	(4)	-	-	-	-
Class A	1,416	10.13	-	-	-	-	-	-	-	-	7	(4)	1	1	19	-	35	1	6	14	14	3	-	1	-	-	-	-
Class B	2,809	8.89	1	-	2	10	1	1	4	1	2	26	1	15	16	2	(4)	15	2	-	2	-	-	-	-	-	-	-
Class C	335	7.91	4	2	1	5	9	1	1	56	15	(4)	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Electricians, maintenance	36	13.76	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	22	14	8	3	47
Inspectors	909	9.63	-	-	-	(4)	2	1	2	3	4	2	4	1	38	1	15	1	10	7	6	(4)	-	1	-	-	-	-
Class A	369	10.01	-	-	-	-	-	-	-	-	2	-	1	(4)	38	(4)	33	-	4	7	12	1	-	4	-	-	-	-
Class B	468	9.54	-	-	-	(4)	-	2	2	3	4	3	6	2	45	2	3	(4)	17	9	3	(4)	-	-	-	-	-	-
Class C	72	8.29	-	-	-	-	22	6	15	19	11	6	4	-	-	-	-	15	-	-	1	-	-	-	-	-	-	-
Janitors, porters, and cleaners	279	8.46	5	6	-	-	1	2	1	42	4	7	6	1	2	2	2	9	-	9	-	-	-	-	-	-	-	-
Laborers, material handling	139	9.23	-	-	-	-	-	12	2	-	-	35	4	-	-	-	9	29	-	9	-	-	-	-	-	-	-	-
Machinists, production	68	11.20	-	-	-	-	-	-	-	-	-	-	15	-	-	-	-	-	-	10	40	1	12	22	-	-	-	-
Mechanics, maintenance	153	11.84	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	-	3	3	-	63	4	22	-	-	-	-
Polishing- and buffing-machine operators	32	9.40	-	-	-	-	-	-	-	-	-	-	-	56	41	-	-	-	3	-	-	-	-	-	-	-	-	-
Punch-press operators	150	9.93	-	-	-	-	-	-	8	-	-	-	3	-	18	-	11	18	20	19	3	-	-	-	-	-	-	-
Class A	107	10.14	-	-	-	-	-	-	-	-	-	-	-	-	25	-	15	-	28	27	5	-	-	-	-	-	-	-
Tool and die makers	429	12.78	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	8	2	-	2	6	4	10	13	41	7	3
Jobbing	323	12.71	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	11	3	-	-	3	3	7	14	45	9	-
Other than jobbing	106	12.97	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	16	8	22	9	26	-	12
Tool clerks	42	9.89	-	-	-	-	-	-	-	-	2	19	-	-	38	12	-	-	2	5	10	-	-	12	-	-	-	-
Welders, machine	1,161	10.68	-	-	-	-	-	1	-	-	1	3	(4)	2	4	3	1	(4)	27	4	54	-	-	-	-	-	-	-
Class A	1,096	10.71	-	-	-	-	-	-	-	-	1	3	-	2	4	4	1	(4)	28	-	58	-	-	-	-	-	-	-
Class B	65	10.11	-	-	-	-	-	18	-	-	-	-	6	-	-	-	-	-	-	75	-	-	-	-	-	-	-	-

[1] The Minneapolis-St. Paul metropolitan area consists of Anoka, Carver, Chisago, Dakota, Hennepin, Ramsey, Scott, Washington, and Wright Counties, Minn.; and St. Croix County, Wis.

[2] Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

[3] Overall occupation may include data for subcategories not shown separately. All workers were timeworkers.

[4] Less than 0.5 percent.

NOTE: Because of rounding, sums of individual items may not equal 100. Dashes indicate no data.

Table 23. Occupational earnings distribution: Newark, N.J.—all machinery industries[1]

(Number and average straight-time hourly earnings[2] of production workers in selected occupations, November 1983)

Occupation[3]	Number of workers	Average hourly earnings	Percent of workers receiving straight-time hourly earnings (in dollars) of—																									
			Under 3.50	3.50 and under 3.75	3.75 - 4.00	4.00 - 4.25	4.25 - 4.50	4.50 - 4.75	4.75 - 5.00	5.00 - 5.25	5.25 - 5.50	5.50 - 6.00	6.00 - 6.50	6.50 - 7.00	7.00 - 7.50	7.50 - 8.00	8.00 - 8.50	8.50 - 9.00	9.00 - 9.50	9.50 - 10.00	10.00 - 10.50	10.50 - 11.00	11.00 - 11.50	11.50 - 12.00	12.00 - 12.50	12.50 - 13.00	13.00 - 13.50	13.50 - 14.00	14.00 and over
Machine-tool operators, production, class A	490	$9.83	-	-	-	-	-	-	-	-	-	-	-	1	2	2	4	5	9	34	22	9	3	6	(4)	1	(4)	(4)	-
Automatic-lathe operators	23	10.23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	26	35	-	35	-	-	-	-	-	-
Drill-press operators, radial	21	9.69	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	48	29	14	-	-	-	-	5	-	-	-
Engine-lathe operators	82	10.30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	16	10	43	1	5	21	1	1	-	-	-
Grinding-machine operators	165	9.96	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	2	75	5	5	-	8	-	1	1	1	-
Machine-tool operators, miscellaneous	127	9.24	-	-	-	-	-	-	-	-	-	-	-	3	9	9	6	9	15	14	13	15	2	-	-	2	-	-	-
Milling-machine operators	16	10.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	-	19	63	6	-	-	-	-	-	-	-
Screw-machine operators, automatic	27	10.38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	4	63	30	-	-	-	-	-	-	-
Machine-tool operators, production, class B	269	9.38	-	-	-	-	-	-	(4)	-	3	(4)	1	3	3	6	8	7	6	3	43	18	-	-	-	-	-	-	-
Engine-lathe operators	16	8.84	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	50	44	-	-	-	-	-	-	-	-	-	-
Grinding-machine operators	38	8.52	-	-	-	-	-	-	-	-	5	3	-	-	-	21	32	11	-	5	24	-	-	-	-	-	-	-	-
Machine-tool operators, miscellaneous	112	10.05	-	-	-	-	-	-	-	-	-	-	3	-	-	5	2	-	3	4	40	43	-	-	-	-	-	-	-
Milling-machine operators	39	8.71	-	-	-	-	-	-	-	-	-	-	-	18	21	-	3	10	8	-	41	-	-	-	-	-	-	-	-
Machine-tool operators, production, class C	76	5.31	9	5	1	5	18	9	17	-	-	5	4	-	13	3	1	-	8	-	-	-	-	-	-	-	-	-	-
Machine-tool operators, production, numerically controlled, set up and operate	109	10.54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	37	19	16	-	3	4	-	2	-
Automatic-lathe operators	26	10.30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23	50	4	23	-	-	-	-	-	-
Machine-tool operators, miscellaneous	54	10.68	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	39	35	15	-	-	2	-	4	-
Milling-machine operators	11	11.65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18	-	-	27	-	27	27	-	-	-
Machine-tool operators, production, numerically controlled, operate only	16	9.26	-	-	-	-	-	-	-	-	-	-	-	-	-	25	6	-	-	38	31	-	-	-	-	-	-	-	-
Machine-tool operators, toolroom	125	10.09	-	-	-	-	-	-	-	-	1	-	2	3	11	6	6	6	14	2	6	6	1	6	4	5	13	6	2
Operates only one type of machine tool	77	10.45	-	-	-	-	-	-	-	-	1	-	4	4	3	1	9	-	22	3	9	1	-	9	5	6	17	5	-
Drill-press operators, radial	13	10.47	-	-	-	-	-	-	-	-	-	-	-	-	8	-	-	-	46	-	-	8	-	15	8	-	15	-	-
Engine-lathe operators	15	10.90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	27	-	13	-	7	-	-	7	13	13	13	7	-
Grinding-machine operators	35	10.35	-	-	-	-	-	-	-	-	3	-	6	3	3	3	3	-	26	6	9	-	-	6	3	6	20	6	-
Operates more than one type of machine tool	48	9.50	-	-	-	-	-	-	-	-	-	-	-	2	25	15	2	15	2	2	-	13	2	2	2	2	6	6	4
Assemblers	963	7.84	(4)	(4)	-	(4)	3	5	-	7	(4)	6	12	3	2	15	3	2	12	17	7	4	1	1	-	-	(4)	-	-
Class A	165	9.47	-	-	-	-	-	-	-	-	-	2	7	1	3	2	5	2	5	28	28	8	-	7	-	-	1	-	-
Class B	368	8.04	-	-	-	-	-	-	-	-	(4)	9	26	8	3	2	3	4	18	11	7	8	1	-	-	-	-	-	-
Class C	430	7.05	(4)	(4)	-	(4)	6	12	-	16	(4)	5	1	-	(4)	31	1	1	9	16	-	-	-	-	-	-	-	-	-
Electricians, maintenance	76	11.11	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	5	1	4	7	11	53	5	-	11	-	1	-
Inspectors	266	8.44	-	-	-	-	-	2	-	1	-	3	4	2	12	10	11	12	26	5	3	8	2	-	-	-	(4)	-	-
Class A	82	9.60	-	-	-	-	-	-	-	-	-	-	1	6	1	5	5	1	26	15	9	26	5	-	-	-	1	-	-
Class B	139	8.27	-	-	-	-	-	2	-	-	-	-	-	1	22	-	19	23	33	-	1	-	-	-	-	-	-	-	-
Class C	45	6.81	-	-	-	-	-	4	-	4	-	16	22	-	-	51	-	-	2	-	-	-	-	-	-	-	-	-	-

See footnotes at end of table.

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Table 23. Occupational earnings distribution: Newark, N.J.—all machinery industries[1]—Continued

(Number and average straight-time hourly earnings[2] of production workers in selected occupations, November 1983)

Occupation[3]	Number of workers	Average hourly earnings	Percent of workers receiving straight-time hourly earnings (in dollars) of—																										
			Under 3.50	3.50 and under 3.75	3.75 - 4.00	4.00 - 4.25	4.25 - 4.50	4.50 - 4.75	4.75 - 5.00	5.00 - 5.25	5.25 - 5.50	5.50 - 6.00	6.00 - 6.50	6.50 - 7.00	7.00 - 7.50	7.50 - 8.00	8.00 - 8.50	8.50 - 9.00	9.00 - 9.50	9.50 - 10.00	10.00 - 10.50	10.50 - 11.00	11.00 - 11.50	11.50 - 12.00	12.00 - 12.50	12.50 - 13.00	13.00 - 13.50	13.50 - 14.00	14.00 and over
Janitors, porters, and cleaners	57	$7.05	–	–	–	–	2	12	–	7	–	9	2	9	12	12	7	21	7	–	–	–	–	–	–	–	–	–	–
Laborers, material handling	122	6.36	2	–	–	1	1	1	1	25	4	15	11	5	17	1	4	5	–	8	–	–	–	–	–	–	–	–	–
Machinists, production	145	10.58	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	8	20	2	14	6	12	26	6	6	–	–	–
Polishers and buffers, metal	27	10.08	–	–	–	–	–	–	–	–	–	–	–	–	4	19	–	4	11	4	11	11	11	11	15	–	–	–	–
Tool and die makers	534	11.77	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	6	(4)	3	7	7	24	9	10	5	15	8	5
Jobbing	416	11.86	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2	7	–	3	8	8	12	6	12	6	19	11	6
Tool clerks	31	9.09	–	–	–	–	–	–	–	–	–	–	–	–	3	–	19	6	52	–	19	–	–	–	–	–	–	–	–
Welders, hand	292	10.15	–	–	–	–	–	–	–	–	–	–	–	–	–	2	2	2	20	4	36	5	28	(4)	–	–	–	–	–
Class A	155	10.52	–	–	–	–	–	–	–	–	–	–	–	–	–	4	3	–	9	–	22	10	52	1	–	–	–	–	–
Class B	137	9.73	–	–	–	–	–	–	–	–	–	–	–	–	–	1	1	4	33	9	51	–	1	–	–	–	–	–	–

[1] The Newark metropolitan area consists of Essex, Morris, Somerset, and Union Counties.

[2] Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

[3] Overall occupation may include data for subcategories not shown separately. Virtually all workers were timeworkers.

[4] Less than 0.5 percent.

NOTE: Because of rounding, sums of individual items may not equal 100. Dashes indicate no data.

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Table 24. Occupational earnings distribution: Newark, N.J.—special dies and tools and machine tool accessories[1]

(Number and average straight-time hourly earnings[2] of production workers in selected occupations, November 1983)

Occupation[3]	Number of workers	Average hourly earnings	Percent of workers receiving straight-time hourly earnings (in dollars) of—																								
			Under 3.50	3.50 and under 3.75	3.75 - 4.00	4.00 - 4.25	4.25 - 4.50	4.50 - 4.75	4.75 - 5.00	5.00 - 5.25	5.25 - 5.50	5.50 - 6.00	6.00 - 6.50	6.50 - 7.00	7.00 - 7.50	7.50 - 8.00	8.00 - 8.50	8.50 - 9.00	9.00 - 9.50	9.50 - 10.00	10.00 - 10.50	10.50 - 11.00	11.00 - 11.50	11.50 - 12.00	12.00 - 12.50	12.50 - 13.00	13.00 - 13.50	13.50 - 14.00	14.00 and over
Machine-tool operators, production, class A	187	$10.24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	20	32	13	6	7	16	1	3	1	1	-
Automatic-lathe operators	14	10.37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	43	-	-	57	-	-	-	-	-	-
Drill-press operators, radial	12	9.87	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	58	33	-	-	-	-	-	8	-	-	-
Engine-lathe operators	50	10.53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	26	6	20	2	8	34	2	2	-	-	-
Grinding-machine operators	62	10.22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	5	58	-	6	-	21	-	2	2	2	-
Machine-tool operators, miscellaneous	30	9.99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	43	23	-	23	-	-	-	10	-	-	-
Machine-tool operators, production, class B	79	8.34	-	-	-	-	-	-	-	-	-	-	4	9	10	18	13	18	14	4	11	-	-	-	-	-	-	-	-
Grinding-machine operators	30	8.84	-	-	-	-	-	-	-	-	-	-	-	-	-	27	27	10	-	7	30	-	-	-	-	-	-	-	-
Machine-tool operators, production, class C	68	4.89	[4] 10	0	1	6	21	10	19	-	-	6	4	-	13	1	1	-	-	-	-	-	-	-	-	-	-	-	-
Machine-tool operators, production, numerically controlled, set up and operate	48	10.81	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	40	6	-	35	-	6	6	-	4	-
Machine-tool operators, miscellaneous	14	11.37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21	-	-	57	-	-	7	-	14	-
Machine-tool operators, toolroom	117	10.06	-	-	-	-	-	-	-	-	1	-	3	3	12	7	7	6	15	3	4	1	1	7	4	5	14	6	2
Operates only one type of machine tool	75	10.47	-	-	-	-	-	-	-	-	1	-	4	4	3	1	0	-	23	3	7	1	-	9	5	7	17	5	-
Drill-press operators, radial	13	10.47	-	-	-	-	-	-	-	-	-	-	-	-	8	-	-	-	46	-	-	8	-	15	8	-	15	-	-
Engine-lathe operators	15	10.90	-	-	-	-	-	-	-	-	-	-	-		-	-	27	-	13	-	7	-	-	7	13	13	13	7	-
Grinding-machine operators	33	10.37	-	-	-	-	-	-	-	-	3	-	6	3	3	3	3	-	27	6	3	-	-	6	3	6	21	6	-
Operates more than one type of machine tool	42	9.32	-	-	-	-	-	-	-	-	-	-	-	2	29	17	2	17	2	2	-	-	2	2	2	2	7	7	5
Assemblers	47	6.26	2	2	-	4	23	6	-	-	2	23	-	-	2	15	4	2	11	-	-	-	-	-	-	-	2	-	-
Class C	36	5.39	3	3	-	6	31	8	-	-	3	31	-	-	-	17	-	-	-	-	-	-	-	-	-	-	-	-	-
Electricians, maintenance	6	10.86	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17	33	33	-	-	-	-	-	17	-
Inspectors	35	7.29	-	-	-	-	-	14	-	6	-	-	3	6	14	11	43	-	-	-	-	-	-	-	-	-	3	-	-
Class A	9	7.93	-	-	-	-	-	-	-	-	-	-	11	22	11	44	-	-	-	-	-	-	-	-	-	-	11	-	-
Class B	22	7.49	-	-	-	-	-	14	-	-	-	-	-	-	18	-	68	-	-	-	-	-	-	-	-	-	-	-	-
Janitors, porters, and cleaners	15	5.95	-	-	-	-	7	47	-	-	-	-	7	-	13	-	27	-	-	-	-	-	-	-	-	-	-	-	-
Machinists, production	84	10.55	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	14	15	4	14	-	20	11	11	10	-	-	-
Mechanics, maintenance	12	9.88	-	-	-	-	-	-	-	-	-	-	-	-	25	-	-	-	17	8	8	17	-	-	17	8	-	-	-
Polishers and buffers, metal	19	10.75	-	-	-	-	-	-	-	-	-	-	-	-	5	-	-	5	11	5	5	16	16	16	21	-	-	-	-
Tool and die makers	414	11.85	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	7	-	3	8	8	12	7	10	6	19	11	6
Jobbing	411	11.85	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	7	-	3	8	8	12	7	10	6	19	11	6
Tool clerks	7	8.86	-	-	-	-	-	-	-	-	-	-	-	-	-	-	71	-	-	-	29	-	-	-	-	-	-	-	-

[1] The Newark metropolitan area consists of Essex, Morris, Somerset, and Union Counties. Data relate to workers in establishments primarily manufacturing special dies and tools, die sets, jigs and fixtures; or machine-tool accessories and measuring devices.

[2] Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

[3] Overall occupation may include data for subcategories not shown separately. Virtually all workers were timeworkers.

[4] All workers were at $3.35 and under $3.50.

NOTE: Because of rounding, sums of individual items may not equal 100. Dashes indicate no data.

Table 25. Occupational earnings distribution: New York, N.Y.-N.J.—all machinery industries[1]

(Number and average straight-time hourly earnings[2] of production workers in selected occupations, November 1983)

Occupation[3]	Number of workers	Average hourly earnings	Percent of workers receiving straight-time hourly earnings (in dollars) of—																									
			Under 3.50	3.50 and under 3.75	3.75 - 4.00	4.00 - 4.25	4.25 - 4.50	4.50 - 4.75	4.75 - 5.00	5.00 - 5.25	5.25 - 5.50	5.50 - 6.00	6.00 - 6.50	6.50 - 7.00	7.00 - 7.50	7.50 - 8.00	8.00 - 8.50	8.50 - 9.00	9.00 - 9.50	9.50 - 10.00	10.00 - 10.50	10.50 - 11.00	11.00 - 11.50	11.50 - 12.00	12.00 - 12.50	12.50 - 13.00	13.00 - 13.50	13.50 - 14.00	14.00 and over
Machine-tool operators, production, class A	323	$10.22	-	-	-	-	-	-	-	-	-	-	1	2	2	1	4	8	17	7	16	15	10	9	-	2	-	6	2
Engine-lathe operators	32	10.26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	28	3	6	59	-	3	-	-	-	-	-
Grinding-machine operators	41	8.71	-	-	-	-	-	-	-	-	-	-	-	-	12	10	29	2	32	-	7	7	-	-	-	-	-	-	-
Machine-tool operators, miscellaneous	156	11.13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	5	13	26	10	9	17	-	4	-	12	4
Milling-machine operators	56	9.24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	44	36	-	-	15	-	4	-	-	-	-	-
Machine-tool operators, production, class B	261	7.54	-	-	-	-	-	2	-	1	-	4	11	6	19	31	10	6	3	3	3	-	-	-	-	-	-	-	-
Drill-press operators, single- or multiple-spindle	38	6.12	-	-	-	-	-	13	-	5	-	24	16	18	26	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Engine-lathe operators	38	7.98	-	-	-	-	-	-	-	3	-	3	-	3	3	37	42	5	-	-	5	-	-	-	-	-	-	-	-
Machine-tool operators, miscellaneous	46	7.83	-	-	-	-	-	-	-	-	-	-	13	-	17	39	9	4	-	17	-	-	-	-	-	-	-	-	-
Milling-machine operators	24	8.44	-	-	-	-	-	-	-	-	-	-	25	-	-	-	8	42	-	-	25	-	-	-	-	-	-	-	-
Turret-lathe operators, hand	23	7.56	-	-	-	-	-	-	-	-	-	-	-	26	-	52	22	-	-	-	-	-	-	-	-	-	-	-	-
Machine-tool operators, production, class C	245	5.81	-	-	-	1	12	10	1	7	10	25	11	4	12	2	1	-	4	-	-	-	-	-	-	-	-	-	-
Grinding-machine operators	45	6.54	-	-	-	-	-	13	4	-	-	31	11	18	-	-	-	-	22	-	-	-	-	-	-	-	-	-	-
Machine-tool operators, production, numerically controlled, set up and operate	49	10.15	-	-	-	-	-	-	-	-	-	-	-	-	4	-	24	-	10	6	2	6	-	47	-	-	-	-	-
Machine-tool operators, toolroom:																													
Operates only one type of machine tool	39	7.86	-	-	-	-	-	-	-	-	-	-	-	5	46	18	15	3	3	3	-	3	3	-	3	-	-	-	-
Grinding-machine operators	8	8.71	-	-	-	-	-	-	-	-	-	-	-	-	13	25	25	13	-	-	-	13	13	-	-	-	-	-	-
Assemblers	1,359	6.98	(4)	1	1	-	1	1	2	17	6	13	8	10	13	1	3	4	5	3	1	6	1	1	1	-	1	(4)	-
Class A	378	9.04	-	-	-	-	-	-	-	-	-	-	5	17	12	2	4	4	12	7	3	20	2	3	1	-	3	2	-
Class B	766	6.31	-	(4)	-	-	-	(4)	2	29	8	14	9	8	16	(4)	3	6	3	(4)	1	1	-	-	1	-	-	-	-
Inspectors	250	8.18	-	-	-	-	-	-	-	3	-	2	-	42	4	4	5	9	6	6	6	2	4	4	3	1	-	1	-
Class A	81	9.35	-	-	-	-	-	-	-	-	-	7	-	7	10	2	-	-	17	17	16	2	9	1	5	2	-	2	-
Class B	49	9.63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18	45	-	-	4	4	4	16	8	-	-	-	-
Janitors, porters, and cleaners	73	5.57	8	-	-	8	4	8	3	3	5	8	38	7	5	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Laborers, material handling	88	6.53	-	-	-	-	-	-	-	8	-	31	19	26	2	7	-	-	7	-	-	-	-	-	-	-	-	-	-
Machinists, production	258	9.22	-	-	-	-	-	-	-	-	-	-	-	5	3	14	16	10	7	10	9	17	-	2	3	5	-	-	-
Punch-press operators	208	5.22	6	-	1	13	2	(4)	-	30	11	26	2	7	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Class B	202	5.17	6	-	1	13	2	(4)	-	31	11	27	2	4	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tool and die makers	194	11.14	-	-	-	-	-	-	-	-	-	-	-	2	2	3	5	6	3	8	13	5	6	4	18	4	4	-	[5] 19
Jobbing	107	11.17	-	-	-	-	-	-	-	-	-	-	-	3	-	6	6	11	3	11	3	8	9	-	-	-	7	-	34
Other than jobbing	87	11.11	-	-	-	-	-	-	-	-	-	-	-	-	3	-	5	-	3	5	26	-	2	6	39	6	-	-	-
Tool clerks	28	6.59	-	-	-	-	-	-	-	-	-	-	50	36	4	4	7	-	-	-	-	-	-	-	-	-	-	-	-
Welders, hand:																													
Class A	18	10.22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	-	11	33	-	11	33	-	-	-	-	-	-
Welders, machine	148	6.67	-	-	3	3	-	5	6	2	1	19	2	9	23	8	11	-	-	-	4	-	-	-	-	-	-	4	-
Class A	88	7.32	-	-	-	-	-	-	2	3	2	30	3	16	5	14	11	-	-	-	7	-	-	-	-	-	-	7	-
Class B	60	6.22	-	-	7	7	-	12	12	-	-	3	-	-	50	-	10	-	-	-	-	-	-	-	-	-	-	-	-

[1] The New York metropolitan area consists of New York City (Bronx, Kings, New York, Queens, and Richmond Counties) and Putnam, Rockland, and Westchester Counties, N.Y.; and Bergen County, N.J.

[2] Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

[3] Overall occupation may include data for subcategories not shown separately. All workers were timeworkers.

[4] Less than 0.5 percent.

[5] All workers were at $14 and under $14.50.

NOTE: Because of rounding, sums of individual items may not equal 100. Dashes indicate no data.

Table 26. Occupational earnings distribution: Philadelphia, Pa.-N.J.—all machinery industries[1]

(Number and average straight-time hourly earnings[2] of production workers in selected occupations, November 1983)

Occupation and method of wage payment[3]	Number of workers	Average hourly earnings	Percent of workers receiving straight-time hourly earnings (in dollars) of—																										
			Under 4.50	4.50 and under 4.75	4.75 - 5.00	5.00 - 5.25	5.25 - 5.50	5.50 - 5.75	5.75 - 6.00	6.00 - 6.25	6.25 - 6.50	6.50 - 6.75	6.75 - 7.00	7.00 - 7.25	7.25 - 7.50	7.50 - 7.75	7.75 - 8.00	8.00 - 8.50	8.50 - 9.00	9.00 - 9.50	9.50 - 10.00	10.00 - 10.50	10.50 - 11.00	11.00 - 11.50	11.50 - 12.00	12.00 - 12.50	12.50 - 13.00	13.00 - 13.50	13.50 and over
Machine-tool operators, production, class A	318	$9.79	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	6	17	6	20	23	13	10	(4)	-	-	-	-
Time	848	9.81	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	8	17	5	21	23	14	10	-	-	-	-	-
Automatic-lathe operators	67	9.09	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24	39	9	4	18	3	-	3	-	-	-	-
Drill-press operators, radial	52	10.16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	31	54	-	10	-	-	-	-	-
Time	49	10.21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	33	57	-	10	-	-	-	-	-
Engine-lathe operators[5]	112	9.91	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	7	-	-	33	29	25	-	-	-	-	-	-
Grinding-machine operators[5]	146	9.83	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	5	14	14	38	1	15	9	-	-	-	-	-
Machine-tool operators, miscellaneous[5]	274	9.97	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	9	9	-	31	9	25	-	-	-	-	-
Milling-machine operators[5]	163	9.92	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22	1	30	24	23	-	-	-	-	-	-
Machine-tool operators, production, class B	469	8.11	-	-	-	-	-	-	6	3	1	12	4	3	5	6	7	13	10	15	8	3	(4)	3	(4)	(4)	-	-	-
Time	303	7.49	-	-	-	-	-	-	9	4	2	18	7	4	8	10	12	7	4	10	6	1	-	-	-	-	-	-	-
Drill-press operators, single- or multiple-spindle[5]	21	7.07	-	-	-	-	-	-	-	-	-	81	-	-	-	-	-	-	-	19	-	-	-	-	-	-	-	-	-
Machine-tool operators, miscellaneous[5]	103	6.82	-	-	-	-	-	-	25	6	-	25	13	6	-	15	-	-	-	11	-	-	-	-	-	-	-	-	-
Machine-tool operators, production, class C	70	6.82	-	-	-	10	-	10	-	27	-	-	-	-	-	39	9	3	-	3	-	-	-	-	-	-	-	-	-
Time	66	6.71	-	-	-	11	-	11	-	29	-	-	-	-	-	41	9	-	-	-	-	-	-	-	-	-	-	-	-
Grinding-machine operators	18	7.24	-	-	-	-	-	-	-	39	-	-	-	-	-	39	-	11	-	11	-	-	-	-	-	-	-	-	-
Machine-tool operators, production, numerically controlled, set up and operate[5]	588	10.18	-	-	-	-	-	-	-	-	-	-	6	-	-	4	9	2	2	3	20	-	14	27	5	(4)	5	3	-
Machine-tool operators, miscellaneous	328	9.75	-	-	-	-	-	-	-	-	-	-	11	-	-	7	15	4	-	-	15	-	7	29	5	1	3	2	-
Milling-machine operators	78	10.16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	21	38	-	19	-	19	-	-	-	-
Machine-tool operators, toolroom	191	11.11	-	-	-	-	-	-	-	-	-	-	7	-	-	-	-	1	7	1	17	7	13	7	20	7	7	7	
Operates more than one type of machine tool[5]	160	11.21	-	-	-	-	-	-	-	-	-	-	8	-	-	-	-	1	-	-	21	8	13	-	24	8	8	8	
Assemblers	3,204	7.80	4	2	1	2	1	4	3	2	2	7	8	3	3	7	5	15	3	8	6	3	6	4	-	-	1	-	-
Time	3,037	7.84	5	2	1	2	1	3	2	2	1	7	7	3	3	7	6	16	3	7	6	3	6	4	-	-	1	-	-
Class A	841	9.78	-	-	-	-	-	-	-	-	-	-	3	-	1	2	-	11	4	25	14	4	16	15	-	-	5	-	-
Time	764	9.95	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	12	4	24	15	4	18	17	-	-	5	-	-
Class B[5]	1,397	7.71	1	3	(4)	(4)	1	3	2	2	3	3	14	1	5	5	10	27	4	3	6	3	3	-	-	-	-	-	-
Class C[5]	966	6.22	13	2	2	7	2	8	5	4	2	18	3	9	2	15	2	-	-	-	1	-	-	-	-	-	-	-	-
Carpenters, maintenance	10	9.59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	20	50	10	-	-	-	-	-	-	-
Electricians, maintenance	89	10.87	-	-	-	-	-	-	-	-	-	-	-	-	-	8	-	-	7	-	16	2	1	20	42	4	-	-	-
Time	77	10.81	-	-	-	-	-	-	-	-	-	-	-	-	-	9	-	-	8	-	16	-	1	21	45	-	-	-	-
Inspectors	606	8.79	-	-	-	-	(4)	1	-	1	-	17	7	7	(4)	2	2	12	12	4	7	3	4	6	8	1	5	-	-
Time	556	8.67	-	-	-	-	1	1	-	1	-	19	7	8	(4)	2	3	12	12	3	6	2	4	6	8	-	6	-	-
Class A	268	10.28	-	-	-	-	-	-	-	-	-	-	3	-	-	-	1	11	11	4	17	5	4	10	19	2	12	-	-
Time	236	10.23	-	-	-	-	-	-	-	-	-	-	3	-	-	-	2	11	13	4	15	6	5	9	19	-	14	-	-
Class B	205	8.19	-	-	-	-	1	-	-	1	-	5	13	17	(4)	4	-	19	21	6	-	2	6	5	-	-	-	-	-
Time	187	8.09	-	-	-	-	2	-	-	1	-	6	14	18	1	4	-	19	21	2	-	-	6	6	-	-	-	-	-

See footnotes at end of table.

Table 26. Occupational earnings distribution: Philadelphia, Pa.-N.J.—all machinery industries[1]—Continued

(Number and average straight-time hourly earnings[2] of production workers in selected occupations, November 1983)

Occupation and method of wage payment[3]	Number of workers	Average hourly earnings	Percent of workers receiving straight-time hourly earnings (in dollars) of—																								
			Under 4.50	4.50 and under 4.75	4.75 - 5.00	5.00 - 5.25	5.25 - 5.50	5.50 - 5.75	5.75 - 6.00	6.00 - 6.25	6.25 - 6.50	6.50 - 6.75	6.75 - 7.00	7.00 - 7.25	7.25 - 7.50	7.50 - 7.75	7.75 - 8.00	8.00 - 8.50	8.50 - 9.00	9.00 - 9.50	9.50 - 10.00	10.00 - 10.50	10.50 - 11.00	11.00 - 11.50	11.50 - 12.00	12.00 - 12.50	12.50 - 13.00	13.00 - 13.50	13.50 and over
Janitors, porters, and cleaners[5]	180	$7.06	3	3	[4]	4	14	–	8	4	–	–	4	7	1	8	11	3	–	24	–	–	–	–	–	–	–	–
Laborers, material handling	87	8.08	–	–	–	–	–	–	–	8	8	–	–	8	2	8	–	31	–	34	–	–	–	–	–	–	–	–
Machinists, maintenance	32	9.94	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	31	6	–	13	3	19	22	–	6	–	–
Time	24	9.58	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	42	8	–	8	4	17	21	–	–	–	–
Machinists, production	193	9.30	–	–	–	–	–	–	–	–	–	–	–	–	–	7	7	13	22	22	3	2	18	–	7	–	–	–
Time	131	9.75	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	9	23	31	–	3	24	–	10	–	–	–
Mechanics, maintenance[5]	168	10.70	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	14	8	10	2	–	–	26	35	–	–	5
Tool and die makers	852	11.73	–	–	–	–	–	–	–	–	–	–	2	–	2	2	2	2	2	3	2	2	5	16	9	11	17	18
Time	846	11.73	–	–	–	–	–	–	–	–	–	–	2	–	2	2	2	2	2	3	2	2	5	16	9	11	17	18
Jobbing[5]	769	11.76	–	–	–	–	–	–	–	–	–	–	2	–	2	2	2	2	2	3	3	2	4	16	5	12	19	19
Other than jobbing	83	11.50	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	10	–	–	–	16	12	47	2	–	13
Time	77	11.47	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	10	–	–	–	17	13	45	–	–	14
Tool clerks[5]	90	8.27	–	–	–	–	14	–	–	–	13	–	–	–	11	8	8	–	–	–	18	28	–	–	–	–	–	–
Welders, hand[5]	274	9.47	–	–	3	–	–	3	–	5	–	3	2	8	–	–	–	3	7	13	4	7	14	30	–	–	–	–
Class A[5]	200	10.50	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	9	17	3	9	19	40	–	–	–	–

[1] The Philadelphia metropolitan area consists of Bucks, Chester, Delaware, Montgomery, and Philadelphia Counties, Pa.; and Burlington, Camden, and Gloucester Counties, N.J.

[2] Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

[3] Overall occupation may include data for subcategories not shown separately. Unless otherwise indicated, virtually all workers were timeworkers.

[4] Less than 0.5 percent.

[5] Virtually all timeworkers.

NOTE: Because of rounding, sums of individual items may not equal 100. Dashes indicate no data.

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Table 27. Occupational earnings distribution: Pittsburgh, Pa.—all machinery industries[1]

(Number and average straight-time hourly earnings[2] of production workers in selected occupations, November 1983)

Occupation[3]	Number of workers	Average hourly earnings	Percent of workers receiving straight-time hourly earnings (in dollars) of—																									
			Under 4.50	4.50 and under 4.75	4.75 - 5.00	5.00 - 5.25	5.25 - 5.50	5.50 - 5.75	5.75 - 6.00	6.00 - 6.25	6.25 - 6.50	6.50 - 6.75	6.75 - 7.00	7.00 - 7.25	7.25 - 7.50	7.50 - 7.75	7.75 - 8.00	8.00 - 8.50	8.50 - 9.00	9.00 - 9.50	9.50 - 10.00	10.00 - 10.50	10.50 - 11.00	11.00 - 11.50	11.50 - 12.00	12.00 - 12.50	12.50 - 13.00	13.00 - 13.50	13.50 and over
Machine-tool operators, production, class A	438	$10.53	-	-	-	-	-	-	-	-	-	-	-	-	5	3	-	-	2	7	-	23	37	2	12	10	-	-	-
Drill-press operators, radial	21	10.56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	29	-	-	-	33	-	38	-	-	-	-
Engine-lathe operators	65	10.64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14	-	48	20	-	-	18	-	-	-
Grinding-machine operators	24	11.57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	29	-	54	17	-	-	-
Machine-tool operators, miscellaneous	202	10.66	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(4)	10	-	20	50	-	10	9	-	-	-
Milling-machine operators	38	10.88	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	34	39	18	8	-	-	-	-
Turret-lathe operators, hand	56	9.72	-	-	-	-	-	-	-	-	-	-	-	36	-	-	-	-	-	-	-	14	32	4	-	14	-	-	-
Machine-tool operators, production, class B	176	8.89	-	-	-	-	-	-	-	-	-	-	9	-	-	-	-	10	55	5	2	7	3	9	-	-	-	-	-
Machine-tool operators, miscellaneous	76	8.87	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16	67	-	-	11	3	4	-	-	-	-	-
Machine-tool operators, production, class C	132	7.48	-	-	-	-	-	-	-	-	-	-	48	-	-	-	39	7	-	-	3	2	2	-	-	-	-	-	-
Machine-tool operators, production, numerically controlled, set up and operate	41	11.46	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	37	22	7	34	-	-	-
Machine-tool operators, miscellaneous	19	11.65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	32	5	16	47	-	-	-
Machine-tool operators, toolroom	360	10.17	-	-	-	-	-	-	-	-	2	-	5	-	2	4	4	-	7	7	8	26	34	-	-	1	-	-	-
Operates only one type of machine tool:																													
Grinding-machine operators	39	10.13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	31	-	54	-	-	-	-	-	-	-
Operates more than one type of machine tool	294	10.24	-	-	-	-	-	-	-	-	2	-	6	-	2	5	5	-	3	-	10	24	41	-	-	1	-	-	-
Assemblers	791	8.67	4	4	1	-	-	6	-	4	1	7	1	-	3	6	-	11	6	4	11	5	8	12	3	4	-	-	-
Class A	367	9.74	-	-	-	-	-	13	-	-	1	1	-	-	-	-	-	10	4	1	11	9	14	22	5	8	-	-	-
Class B	235	7.63	12	14	2	-	-	-	-	14	-	-	-	-	-	(4)	-	16	12	6	10	4	5	7	-	-	-	-	-
Carpenters, maintenance	7	11.06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	43	-	29	-	29	-	-	-
Electricians, maintenance	86	11.09	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	7	-	10	13	17	17	9	15	-	-
Inspectors	224	10.03	-	-	-	-	-	2	-	2	-	-	21	-	-	2	-	1	5	3	4	1	15	20	5	13	3	(4)	4
Class A	77	11.22	-	-	-	-	-	-	-	-	-	-	-	-	-	5	-	-	-	8	10	4	16	19	12	5	8	1	12
Class B	77	10.50	-	-	-	-	-	5	-	5	-	-	-	-	-	-	-	4	12	-	-	-	27	16	-	31	-	-	-
Janitors, porters, and cleaners	53	8.84	-	-	-	-	-	-	-	-	-	8	11	-	-	-	-	8	15	32	-	26	-	-	-	-	-	-	-
Laborers, material handling	46	9.68	-	-	-	-	-	-	-	-	-	-	7	-	-	-	-	22	-	9	15	22	-	15	11	-	-	-	-
Machinists, production	151	11.65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	68	-	11	20	-	-
Mechanics, maintenance	79	10.47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	11	20	-	8	10	28	-	18	-	-	-
Punch-press operators:																													
Class A	23	11.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52	-	-	-	17	30	-	-	-
Tool and die makers	115	11.28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	12	-	3	49	18	-	13	-	-
Other than jobbing	59	11.21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	24	-	5	-	36	-	25	-	-
Tool clerks	45	10.08	-	-	-	-	-	-	-	-	-	-	-	7	-	-	-	20	-	-	4	36	-	20	13	-	-	-	-
Welders, hand	156	11.15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	33	6	17	4	33	-	-	-
Class A	121	11.36	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	32	1	17	5	42	-	-	-
Class B	35	10.41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23	34	26	17	-	-	-	-	-
Welders, machine:																													
Class A	15	10.51	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	40	-	27	33	-	-	-	-	-

[1] The Pittsburgh metropolitan area consists of Allegheny, Beaver, Washington, and Westmoreland Counties.

[2] Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

[3] Overall occupation may include data for subcategories not shown separately. Virtually all workers were timeworkers.

[4] Less than 0.5 percent.

NOTE: Because of rounding, sums of individual items may not equal 100. Dashes indicate no data.

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Table 28. Occupational earnings distribution: Portland, Oreg.-Wash.—all machinery industries[1]

(Number and average straight-time hourly earnings[2] of production workers in selected occupations, November 1983)

Occupation[3]	Number of workers	Average hourly earnings	Percent of workers receiving straight-time hourly earnings (in dollars) of—																									
			Under 6.25	6.25 and under 6.50	6.50 - 6.75	6.75 - 7.00	7.00 - 7.25	7.25 - 7.50	7.50 - 7.75	7.75 - 8.00	8.00 - 8.25	8.25 - 8.50	8.50 - 8.75	8.75 - 9.00	9.00 - 9.25	9.25 - 9.50	9.50 - 9.75	9.75 - 10.00	10.00 - 10.25	10.25 - 10.50	10.50 - 10.75	10.75 - 11.00	11.00 - 11.25	11.25 - 11.50	11.50 - 11.75	11.75 - 12.00	12.00 - 12.50	12.50 - 13.00	13.00 and over
Machine-tool operators, production, class A	124	$11.40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	-	-	11	13	-	18	-	6	-	11	29	-
Engine-lathe operators	22	11.50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23	-	-	-	14	-	-	-	9	-	18	36	-
Milling-machine operators	17	10.02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	59	-	-	24	18	-	-	-	-	-	-	-	-
Turret-lathe operators, hand	28	11.77	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	32	-	-	-	-	11	-	14	43	-
Machine-tool operators, production, class B	66	10.10	-	-	-	-	-	-	-	-	8	-	-	-	-	27	-	30	-	20	2	-	-	8	6	-	-	-
Drill-press operators, single- or multiple-spindle	13	9.88	-	-	-	-	-	-	-	-	38	-	-	-	-	23	-	-	-	-	8	-	-	-	31	-	-	-
Machine-tool operators, production, numerically controlled, set up and operate	40	11.07	-	-	-	-	-	-	-	-	-	-	-	-	-	25	-	-	-	27	-	5	-	2	-	32	7	-
Machine-tool operators, miscellaneous	14	11.52	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	29	-	14	-	-	-	57	-	-
Electricians, maintenance	10	12.07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	-	30	-	-	-	40	-	[4] 20
Inspectors	28	11.62	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	18	-	-	-	11	-	7	-	-	50	4
Class A	25	11.87	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	-	-	-	12	-	8	-	-	56	4
Janitors, porters, and cleaners	15	6.36	[5] 33	33	7	7	-	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Laborers, material handling	20	7.70	-	50	-	-	-	-	-	20	-	-	-	-	-	-	-	30	-	-	-	-	-	-	-	-	-	-
Machinists, production	360	11.73	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	19	31	-	-	20	24	1
Mechanics, maintenance	22	11.63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23	-	-	-	-	18	-	-	14	-	41	5
Tool and die makers	8	12.51	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	-	-	38	50	-
Other than jobbing	7	12.48	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14	-	-	43	43	-
Welders, hand: Class A	193	11.58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21	-	-	3	12	-	7	-	-	-	13	44	-

[1] The Portland metropolitan area consists of Clackamus, Multnomah, and Washington Counties, Oreg.; and Clark County, Wash.

[2] Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

[3] Overall occupation may include data for subcategories not shown separately. All workers were timeworkers.

[4] Workers were distributed as follows: 10 percent at $13.25 and under $13.50; and 10 percent at $14.25 and under $14.50.

[5] Workers were distributed as follows: 13 percent at $5 and under $5.25; 7 percent $5.25 and under $5.50; and 13 percent at $6 and under $6.25.

NOTE: Because of rounding, sums of individual items may not equal 100. Dashes indicate no data.

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Table 29. Occupational earnings distribution: St. Louis, Mo.–Ill.—all machinery industries[1]

(Number and average straight-time hourly earnings[2] of production workers in selected occupations, November 1983)

Occupation and method of wage payment[3]	Number of workers	Average hourly earnings	Percent of workers receiving straight-time hourly earnings (in dollars) of—																										
			Under 5.00	5.00 and under 5.25	5.25 - 5.50	5.50 - 6.00	6.00 - 6.50	6.50 - 7.00	7.00 - 7.50	7.50 - 8.00	8.00 - 8.50	8.50 - 9.00	9.00 - 9.50	9.50 - 10.00	10.00 - 10.50	10.50 - 11.00	11.00 - 11.50	11.50 - 12.00	12.00 - 12.50	12.50 - 13.00	13.00 - 13.50	13.50 - 14.00	14.00 - 14.50	14.50 - 15.00	15.00 - 15.50	15.50 - 16.00	16.00 - 16.50	16.50 - 17.00	17.00 and over
Machine-tool operators, production, class A	485	$11.63	-	-	-	-	-	-	2	-	9	2	12	7	1	4	17	6	7	11	2	3	1	2	4	4	3	1	1
Time	388	10.76	-	-	-	-	-	-	2	-	12	2	15	9	2	5	21	6	8	13	2	2	-	-	1	-	-	-	-
Automatic-lathe operators[4]	30	12.20	-	-	-	-	-	-	-	-	-	-	3	-	-	-	40	27	-	-	-	27	-	-	-	3	-	-	-
Drill-press operators, single- or multiple-spindle	65	10.48	-	-	-	-	-	-	12	-	-	12	18	35	-	-	-	-	-	-	2	-	2	2	3	2	3	3	8
Time	51	8.97	-	-	-	-	-	-	16	-	-	16	24	45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Engine-lathe operators	113	10.25	-	-	-	-	-	-	-	-	40	-	22	-	-	11	-	1	1	7	9	1	2	1	3	1	2	1	-
Time	98	9.60	-	-	-	-	-	-	-	-	46	-	26	-	-	12	-	-	-	8	9	-	-	-	-	-	-	-	-
Grinding-machine operators	38	10.97	-	-	-	-	-	-	-	-	-	-	29	3	8	3	42	3	-	3	-	3	3	3	-	3	-	-	-
Time	32	10.41	-	-	-	-	-	-	-	-	-	-	34	3	9	3	50	-	-	-	-	-	-	-	-	-	-	-	-
Machine-tool operators, miscellaneous	43	12.14	-	-	-	-	-	-	-	-	-	-	5	-	-	-	72	-	-	2	-	-	-	2	16	2	-	-	-
Time	39	11.81	-	-	-	-	-	-	-	-	-	-	5	-	-	-	79	-	-	3	-	-	-	-	13	-	-	-	-
Milling-machine operators	75	13.54	-	-	-	-	-	-	-	-	-	-	5	-	3	1	15	12	1	13	1	5	1	3	9	12	13	3	1
Time	33	11.49	-	-	-	-	-	-	-	-	-	-	12	-	6	3	30	24	-	24	-	-	-	-	-	-	-	-	-
Screw-machine operators, automatic[4]	52	11.66	-	-	-	-	-	-	-	-	-	-	-	10	-	12	10	10	58	2	-	-	-	-	-	-	-	-	-
Machine-tool operators, production, class B[4]	603	9.20	-	-	-	-	6	4	3	-	4	21	25	5	15	15	-	2	-	-	-	-	-	-	-	-	-	-	-
Drill-press operators, radial	29	9.79	-	-	-	-	-	-	-	-	-	45	-	-	-	55	-	-	-	-	-	-	-	-	-	-	-	-	-
Drill-press operators, single- or multiple-spindle	118	8.90	-	-	-	-	-	-	-	-	-	71	25	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Grinding-machine operators	102	8.43	-	-	-	-	-	25	17	-	-	14	30	2	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Machine-tool operators, miscellaneous	118	9.19	-	-	-	-	-	-	-	-	23	-	54	-	23	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Milling-machine operators	26	9.60	-	-	-	-	-	-	-	-	-	8	35	35	23	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Turret-lathe operators, hand	31	10.19	-	-	-	-	-	-	-	-	-	-	3	42	3	52	-	-	-	-	-	-	-	-	-	-	-	-	-
Machine-tool operators, production, class C	106	7.27	-	15	-	25	8	-	-	-	-	49	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Time	68	6.34	-	24	-	38	12	-	-	-	-	26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Machine-tool operators, production, numerically controlled, set up and operate	259	11.36	-	-	-	-	-	-	-	3	3	10	19	8	12	1	8	-	3	2	7	1	2	4	5	8	3	2	2
Time	195	10.02	-	-	-	-	-	-	-	4	4	14	26	11	15	2	11	-	4	2	9	-	-	-	-	-	-	-	-
Automatic-lathe operators	36	11.10	-	-	-	-	-	-	-	-	-	-	-	25	8	-	44	-	17	3	-	-	-	3	-	-	-	-	-
Time	34	10.94	-	-	-	-	-	-	-	-	-	-	-	26	9	-	47	-	18	-	-	-	-	-	-	-	-	-	-
Engine-lathe operators	67	11.30	-	-	-	-	-	-	-	12	12	-	34	3	4	-	-	-	-	-	-	-	1	4	7	3	3	3	4	7
Time	44	8.92	-	-	-	-	-	-	-	18	18	-	52	5	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Machine-tool operators, miscellaneous[4]	36	11.74	-	-	-	-	-	-	-	-	-	-	11	22	11	-	-	-	-	8	44	-	-	-	-	3	-	-	-
Machine-tool operators, toolroom	111	12.21	-	-	-	-	-	-	-	-	7	7	4	-	8	9	-	4	8	9	-	4	32	1	-	7	-	-	-
Operates only one type of machine tool	12	12.00	-	-	-	-	-	-	-	-	-	-	-	-	-	67	-	-	-	-	-	-	25	8	-	-	-	-	-
Operates more than one type of machine tool[4]	99	12.23	-	-	-	-	-	-	-	-	8	8	4	-	9	2	-	4	9	10	-	4	33	-	-	8	-	-	-
Assemblers	1,515	8.60	-	7	-	2	(5)	15	8	3	21	13	12	2	3	5	3	1	1	1	1	(5)	2	(5)	(5)	(5)	(5)	(5)	-
Time	1,357	8.40	-	7	-	2	(5)	16	8	3	23	7	13	3	4	6	3	1	1	1	1	-	2	-	-	-	-	-	-
Class A	243	11.49	-	-	-	-	-	-	-	-	(5)	6	17	9	2	13	9	4	6	4	8	2	12	2	1	2	(5)	1	-
Time	204	11.00	-	-	-	-	-	-	-	-	(5)	7	21	11	3	16	10	4	5	3	8	-	11	-	-	-	-	-	-
Class B	692	8.73	-	-	-	-	-	-	13	1	35	18	20	2	-	7	3	-	(5)	(5)	(5)	-	(5)	-	-	-	-	-	-
Time	634	8.69	-	-	-	-	-	-	15	1	38	12	22	2	-	8	3	-	-	-	-	-	-	-	-	-	-	-	-
Class C	580	7.22	-	17	-	4	(5)	38	4	5	13	10	(5)	-	7	(5)	(5)	-	-	-	-	-	-	-	-	-	-	-	-
Time	519	7.02	-	19	-	5	(5)	43	4	6	14	(5)	(5)	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-

See footnotes at end of table.

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Table 29. Occupational earnings distribution: St. Louis, Mo.-Ill.—all machinery industries[1]—Continued

(Number and average straight-time hourly earnings[2] of production workers in selected occupations, November 1983)

Occupation and method of wage payment[3]	Number of workers	Average hourly earnings	Percent of workers receiving straight-time hourly earnings (in dollars) of—																									
			Under 5.00	5.00 and under 5.25	5.25 - 5.50	5.50 - 6.00	6.00 - 6.50	6.50 - 7.00	7.00 - 7.50	7.50 - 8.00	8.00 - 8.50	8.50 - 9.00	9.00 - 9.50	9.50 - 10.00	10.00 - 10.50	10.50 - 11.00	11.00 - 11.50	11.50 - 12.00	12.00 - 12.50	12.50 - 13.00	13.00 - 13.50	13.50 - 14.00	14.00 - 14.50	14.50 - 15.00	15.00 - 15.50	15.50 - 16.00	16.00 - 16.50	16.50 - 17.00	17.00 and over
Electricians, maintenance[4]	82	$11.56	-	-	-	-	-	-	-	-	-	-	27	11	-	11	-	1	21	9	1	5	1	-	11	2	-	-	-
Inspectors	276	9.83	-	-	-	-	-	-	2	1	7	9	49	5	3	9	4	-	3	4	1	-	(5)	1	1	2	-	-	-
Time	249	9.71	-	-	-	-	-	-	2	1	8	10	46	5	3	10	4	-	3	4	2	-	(5)	(5)	1	-	-	-	-
Class A	114	10.58	-	-	-	-	-	-	-	2	14	1	25	11	3	7	10	-	7	9	4	-	-	2	4	3	-	-	-
Time	108	10.31	-	-	-	-	-	-	-	2	15	1	27	12	3	7	10	-	7	9	4	-	-	1	2	-	-	-	-
Inspectors, class B[4]	118	9.44	-	-	-	-	-	-	-	-	1	19	65	-	-	13	-	-	-	-	-	-	1	-	-	2	-	-	-
Class C																													
Time	25	8.90	-	-	-	-	-	-	20	-	12	8	36	-	20	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Janitors, porters, and cleaners[4]	164	8.07	-	3	-	-	10	12	4	16	12	20	8	2	10	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Laborers, material handling[4]	321	8.05	2	4	-	-	-	5	11	9	42	8	5	8	4	-	-	-	1	-	-	-	-	-	-	-	-	-	-
Machinists, maintenance[4]	32	13.81	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	-	19	9	-	-	-	16	44	-	-	-	-
Machinists, production[4]	194	12.39	-	-	-	-	-	-	-	-	-	21	-	-	-	-	26	-	-	-	-	-	50	-	3	-	-	-	-
Mechanics, maintenance	69	10.79	-	-	-	-	-	-	-	-	-	1	46	3	1	13	3	-	7	4	7	10	3	-	-	-	-	-	-
Time	64	10.58	-	-	-	-	-	-	-	-	-	2	50	3	2	14	3	-	8	5	6	5	3	-	-	-	-	-	-
Polishers and buffers, metal	41	10.56	-	-	-	-	-	-	5	-	7	-	-	39	-	2	2	34	7	2	-	-	-	-	-	-	-	-	-
Time	37	10.44	-	-	-	-	-	-	5	-	8	-	-	43	-	-	-	38	5	-	-	-	-	-	-	-	-	-	-
Polishing- and buffing-machine operators	23	9.56	-	-	-	-	-	-	-	4	39	26	4	-	-	4	-	13	-	-	-	-	4	-	-	4	-	-	-
Time	17	8.45	-	-	-	-	-	-	-	6	53	35	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Punch-press operators	358	9.16	2	-	-	-	-	-	7	2	9	6	16	56	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Time	339	9.16	2	-	-	-	-	-	7	2	10	6	12	59	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Class A	34	9.43	-	-	-	-	-	-	-	-	-	9	74	-	-	18	-	-	-	-	-	-	-	-	-	-	-	-	-
Time	15	9.75	-	-	-	-	-	-	-	-	-	20	40	-	-	40	-	-	-	-	-	-	-	-	-	-	-	-	-
Setup workers, machine tools	149	10.64	-	-	-	-	-	-	-	-	-	-	19	9	36	5	3	1	24	3	-	-	-	-	-	-	-	-	-
Time	139	10.71	-	-	-	-	-	-	-	-	-	-	20	3	39	5	3	1	26	4	-	-	-	-	-	-	-	-	-
Conventional machines	137	10.62	-	-	-	-	-	-	-	-	-	-	20	10	33	5	3	1	26	2	-	-	-	-	-	-	-	-	-
Time	127	10.70	-	-	-	-	-	-	-	-	-	-	22	3	35	6	3	1	26	2	-	-	-	-	-	-	-	-	-
Tool and die makers[4]	408	14.24	-	-	-	-	-	-	-	-	-	-	-	8	2	-	7	-	2	2	4	1	-	31	15	24	2	2	(5)
Jobbing[4]	142	14.71	-	-	-	-	-	-	-	-	-	-	-	13	6	-	-	-	-	-	-	-	-	-	17	52	6	6	-
Tool clerks[4]	26	9.22	-	-	-	-	-	-	-	-	35	8	23	-	35	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Welders, hand[4]	231	10.41	-	-	-	-	-	1	-	4	2	9	8	14	25	10	2	12	-	2	9	(5)	2	-	(5)	-	-	-	-
Class A[4]	205	10.63	-	-	-	-	-	-	-	3	-	8	3	16	28	12	2	14	-	2	10	(5)	2	-	(5)	-	-	-	-
Welders, machine[4]	45	8.81	-	-	-	-	-	-	47	-	-	9	2	-	13	29	-	-	-	-	-	-	-	-	-	-	-	-	-
Class B[4]	38	8.60	-	-	-	-	-	-	55	-	-	11	-	-	-	34	-	-	-	-	-	-	-	-	-	-	-	-	-

[1] The St. Louis metropolitan area consists of St. Louis City; Franklin, Jefferson, St. Charles, and St. Louis Counties, Mo.; and Clinton, Madison, Monroe, and St. Clair Counties, Ill.

[2] Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

[3] Overall occupation may include data for subcategories not shown separately. Unless otherwise indicated, virtually all workers were timeworkers.

[4] Virtually all timeworkers.

[5] Less than 0.5 percent.

NOTE: Because of rounding, sums of individual items may not equal 100. Dashes indicate no data.

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Table 30. Occupational earnings distribution: San Francisco–Oakland, Calif.—all machinery industries[1]

(Number and average straight-time hourly earnings[2] of production workers in selected occupations, November 1983)

Occupation[3]	Number of workers	Average hourly earnings	Percent of workers receiving straight-time hourly earnings (in dollars) of—																								
			Under 4.50	4.50 and under 4.75	4.75 - 5.00	5.00 - 5.25	5.25 - 5.50	5.50 - 6.00	6.00 - 6.50	6.50 - 7.00	7.00 - 7.50	7.50 - 8.00	8.00 - 8.50	8.50 - 9.00	9.00 - 9.50	9.50 - 10.00	10.00 - 10.50	10.50 - 11.00	11.00 - 11.50	11.50 - 12.00	12.00 - 12.50	12.50 - 13.00	13.00 - 13.50	13.50 - 14.00	14.00 - 14.50	14.50 - 15.00	15.00 and under 15.50
Machine-tool operators, production, class A	103	$13.24	–	–	–	–	–	–	–	–	–	–	–	–	6	9	–	3	3	6	11	–	–	3	20	11	29
Machine-tool operators, production, class B	147	10.32	–	–	–	–	–	–	–	2	10	4	16	4	6	4	4	2	–	–	17	26	4	–	–	–	–
Machine-tool operators, miscellaneous	70	11.96	–	–	–	–	–	–	–	–	–	–	4	4	4	–	–	–	–	–	33	54	–	–	–	–	–
Machine-tool operators, production, class C	214	6.46	8	3	10	11	1	4	4	4	32	3	2	16	–	–	–	–	–	–	–	–	–	–	–	–	–
Machine-tool operators, miscellaneous	171	6.48	9	4	9	12	–	4	4	4	35	–	2	19	–	–	–	–	–	–	–	–	–	–	–	–	–
Machine-tool operators, toolroom	84	14.06	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	17	–	7	14	7	–	6	–	–
Assemblers	898	10.10	(4)	–	–	2	(4)	3	1	1	2	12	1	1	8	35	–	9	1	–	4	4	4	–	3	–	8
Class A	242	12.03	–	–	–	–	–	–	–	3	3	7	3	4	1	1	–	25	–	–	–	–	11	–	10	–	31
Class B	530	9.57	–	–	–	–	–	5	2	(4)	1	18	–	–	–	58	–	–	–	–	7	7	2	–	–	–	–
Class C	126	8.60	2	–	–	17	2	1	2	–	–	–	–	–	52	–	–	16	6	–	–	–	–	–	–	–	–
Inspectors	131	10.47	–	–	–	–	–	6	2	1	8	2	5	2	–	32	–	–	18	–	–	–	–	2	15	8	–
Class A	32	14.34	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	6	59	34	–
Class B	47	9.39	–	–	–	–	–	2	–	2	21	6	13	4	–	–	–	–	51	–	–	–	–	–	–	–	–
Machinists, maintenance	17	14.75	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	24	29	47
Machinists, production	67	14.03	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	6	–	–	–	24	64	6	–
Tool clerks	11	10.92	–	–	–	–	–	–	–	–	–	–	–	–	–	27	–	45	–	–	27	–	–	–	–	–	–
Welders, hand:																											
Class A	62	13.81	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	10	45	45	–	–

[1] The San Francisco–Oakland metropolitan area consists of Alameda, Contra Costa, Marin, San Francisco, and San Mateo Counties.

[2] Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

[3] Overall occupation may include data for subcategories not shown separately. All workers were timeworkers.

[4] Less than 0.5 percent.

NOTE: Because of rounding, sums of individual items may not equal 100. Dashes indicate no data.

Table 31. Occupational earnings distribution: Tulsa, Okla.—all machinery industries[1]

(Number and average straight-time hourly earnings[2] of production workers in selected occupations, November 1983)

Occupation[3]	Number of workers	Average hourly earnings	Percent of workers receiving straight-time hourly earnings (in dollars) of—																									
			Under 5.25	5.25 and under 5.50	5.50 - 5.75	5.75 - 6.00	6.00 - 6.25	6.25 - 6.50	6.50 - 6.75	6.75 - 7.00	7.00 - 7.25	7.25 - 7.50	7.50 - 7.75	7.75 - 8.00	8.00 - 8.25	8.25 - 8.50	8.50 - 8.75	8.75 - 9.00	9.00 - 9.50	9.50 - 10.00	10.00 - 10.50	10.50 - 11.00	11.00 - 11.50	11.50 - 12.00	12.00 - 12.50	12.50 - 13.00	13.00 - 13.50	13.50 and under 14.00
Machine-tool operators, production, class A	420	$10.80	-	-	-	-	-	-	-	-	1	-	(4)	6	(4)	-	3	2	9	5	8	23	4	16	1	11	9	-
Drill-press operators, radial	39	8.58	-	-	-	-	-	-	-	-	15	-	5	36	-	-	-	-	13	23	8	-	-	-	-	-	-	-
Drill-press operators, single- or multiple-spindle	22	9.47	-	-	-	-	-	-	-	-	-	-	-	36	-	-	-	14	5	-	23	-	5	18	-	-	-	-
Engine-lathe operators	26	11.32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	-	23	19	-	35	-	4	12	-
Grinding-machine operators	44	10.30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14	-	18	7	-	30	27	2	2	-	-	-
Machine-tool operators, miscellaneous	201	11.21	-	-	-	-	-	-	-	-	-	-	-	2	1	-	3	-	9	-	4	31	-	20	2	13	13	-
Turret-lathe operators, hand	29	11.76	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21	17	10	-	3	48	-	-
Machine-tool operators, production, class B	91	8.32	-	-	-	-	8	-	1	16	-	15	-	7	-	7	12	4	4	1	11	13	-	-	-	-	-	-
Grinding-machine operators	16	6.90	-	-	-	-	-	-	-	88	-	-	-	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Machine-tool operators, production, class C	21	7.21	-	-	5	-	5	-	-	-	24	57	-	-	-	-	-	10	-	-	-	-	-	-	-	-	-	-
Machine-tool operators, miscellaneous	21	7.21	-	-	5	-	5	-	-	-	24	57	-	-	-	-	-	10	-	-	-	-	-	-	-	-	-	-
Machine-tool operators, production, numerically controlled, set up and operate	234	9.87	-	-	-	-	-	-	-	-	-	-	6	-	3	6	-	12	6	15	13	29	1	3	5	(4)	-	-
Drill-press operators, radial	6	10.50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	50	-	33	-	-	17	-	-	-
Turret-lathe operators, hand	59	9.93	-	-	-	-	-	-	-	-	-	-	-	-	14	14	-	-	-	10	7	54	-	-	-	2	-	-
Machine-tool operators, production, numerically controlled, operate only	14	7.56	-	-	-	-	-	14	14	-	7	14	-	7	14	14	-	14	-	-	-	-	-	-	-	-	-	-
Machine-tool operators, toolroom	42	10.90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	-	17	12	17	10	10	5	-	5	5	17
Operates only one type of machine tool	30	10.93	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	-	20	7	10	13	13	7	-	-	-	23
Grinding-machine operators	22	11.41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	-	-	9	14	18	9	9	-	-	-	32
Assemblers	301	9.13	1	-	3	-	-	5	-	8	2	2	1	8	(4)	7	3	1	5	11	20	14	-	4	-	3	-	1
Class A	173	10.04	-	-	-	-	-	-	-	-	3	-	2	9	-	10	-	-	2	12	25	23	-	7	-	5	-	2
Class B	81	8.62	-	-	-	-	-	19	-	-	-	9	-	10	1	4	2	4	14	16	20	2	-	-	-	-	-	-
Electricians, maintenance	14	11.39	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14	-	7	14	14	29	-	-	-	21
Inspectors	148	9.73	-	-	-	1	-	5	-	2	2	-	-	2	-	-	1	9	18	7	22	13	6	7	-	5	-	-
Class A	115	10.29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	5	18	8	28	17	8	9	-	6	-	-
Class B	23	8.43	-	-	-	-	-	-	-	13	13	-	-	13	-	-	-	30	26	4	-	-	-	-	-	-	-	-
Janitors, porters, and cleaners	51	7.27	8	4	14	4	-	6	8	6	4	14	4	-	6	12	2	-	-	-	-	-	2	8	-	-	-	-
Machinists, production	11	11.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	27	-	73	-	-	-	-	-
Mechanics, maintenance	41	11.50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17	2	12	12	15	5	2	-	-	34
Punch-press operators:																												
Class A	8	9.89	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	-	50	38	-	-	-	-	-	-	-
Setup workers, machine tools	18	10.75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22	-	39	39	-	-	-	-	-
Tool and die makers	50	12.08	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	6	8	20	20	4	10	-	28
Other than jobbing	46	12.22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	4	4	20	22	4	11	-	30
Tool clerks	29	8.60	-	-	-	-	-	10	-	17	-	-	-	7	7	3	14	3	10	14	3	-	-	-	-	10	-	-
Welders, hand	261	9.09	-	-	-	-	9	9	-	-	5	-	2	-	3	1	-	18	-	1	34	5	7	5	(4)	-	1	-
Class A	157	9.95	-	-	-	-	-	4	-	-	4	-	4	-	4	-	-	-	-	1	57	4	12	8	1	-	1	-
Class B	104	7.78	-	-	-	-	23	17	-	-	6	-	-	-	-	2	-	44	-	-	-	8	-	-	-	-	-	-
Welders, machine	146	10.25	-	-	-	-	-	-	-	-	-	-	-	5	-	-	14	4	-	4	18	25	26	2	-	2	-	-
Class A	111	10.74	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	-	5	17	32	34	3	-	3	-	-
Class B	35	8.70	-	-	-	-	-	-	-	-	-	-	-	23	-	-	57	-	-	-	20	-	-	-	-	-	-	-

[1] The Tulsa metropolitan area consists of Creek, Mayes, Osage, Rogers, Tulsa, and Wagoner Counties.

[2] Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

[3] Overall occupation may include data for subcategories not shown separately. All workers were timeworkers.

[4] Less than 0.5 percent.

NOTE: Because of rounding, sums of individual items may not equal 100. Dashes indicate no data.

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Table 32. Occupational earnings distribution: Worcester, Mass.—all machinery industries[1]

(Number and average straight-time hourly earnings[2] of production workers in selected occupations, November 1983)

Occupation[3]	Number of workers	Average hourly earnings	Percent of workers receiving straight-time hourly earnings (in dollars) of—																								
			Under 6.00	6.00 and under 6.25	6.25 - 6.50	6.50 - 6.75	6.75 - 7.00	7.00 - 7.25	7.25 - 7.50	7.50 - 7.75	7.75 - 8.00	8.00 - 8.25	8.25 - 8.50	8.50 - 8.75	8.75 - 9.00	9.00 - 9.25	9.25 - 9.50	9.50 - 9.75	9.75 - 10.00	10.00 - 10.25	10.25 - 10.50	10.50 - 10.75	10.75 - 11.00	11.00 - 11.25	11.25 - 11.50	11.50 - 11.75	11.75 - 12.00	12.00 - 12.25	12.25 and under 12.50
Machine-tool operators, production, class A	273	$9.62	-	-	-	-	1	1	-	1	1	-	2	4	3	12	5	29	6	16	2	5	7	1	(4)	1	-	-	-
Engine-lathe operators	24	9.81	-	-	-	-	-	-	-	-	-	-	4	-	-	29	-	-	-	67	-	-	-	-	-	-	-	-	-
Grinding-machine operators	67	9.69	-	-	-	-	-	-	-	6	-	-	-	-	1	10	3	49	3	6	6	7	4	1	1	-	-	-	-
Machine-tool operators, miscellaneous	70	9.92	-	-	-	-	-	-	-	-	-	-	3	-	4	7	6	29	9	14	1	9	11	4	-	3	-	-	-
Machine-tool operators, production, class B	174	8.14	5	5	2	2	2	-	1	5	9	18	18	9	10	5	2	-	-	-	7	-	-	-	-	-	-	-	-
Drill-press operators, radial	19	9.24	-	-	-	-	-	-	-	-	5	11	11	16	11	5	-	-	-	-	42	-	-	-	-	-	-	-	-
Grinding-machine operators	41	8.55	-	-	-	-	-	-	-	2	10	34	32	2	2	2	5	-	-	-	10	-	-	-	-	-	-	-	-
Machine-tool operators, miscellaneous	52	8.33	-	-	-	-	-	-	-	2	17	19	29	15	13	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Milling-machine operators	21	7.76	-	19	-	19	-	-	5	-	5	-	5	5	24	14	5	-	-	-	-	-	-	-	-	-	-	-	-
Machine-tool operators, production, numerically controlled, set up and operate	95	9.64	-	-	-	-	-	-	-	-	3	4	1	3	3	7	4	38	6	18	4	2	1	-	3	-	1	-	-
Drill-press operators, single- or multiple-spindle	8	9.35	-	-	-	-	-	-	-	-	-	-	-	13	-	50	-	-	38	-	-	-	-	-	-	-	-	-	-
Engine-lathe operators	19	9.05	-	-	-	-	-	-	-	-	16	11	5	11	-	16	-	21	-	21	-	-	-	-	-	-	-	-	-
Machine-tool operators, miscellaneous	23	10.09	-	-	-	-	-	-	-	-	-	9	-	-	-	-	13	4	9	22	13	9	4	-	13	-	4	-	-
Machine-tool operators, toolroom	67	8.94	-	-	-	-	-	-	-	6	3	9	6	18	10	10	10	9	3	10	4	-	-	-	-	-	-	-	-
Operates only one type of machine tool:																													
Grinding-machine operators	8	9.12	-	-	-	-	-	-	-	-	-	-	-	25	25	-	-	50	-	-	-	-	-	-	-	-	-	-	-
Operates more than one type of machine tool	39	9.15	-	-	-	-	-	-	-	-	-	10	5	21	3	18	8	5	5	18	8	-	-	-	-	-	-	-	-
Assemblers	219	9.24	-	-	-	-	-	-	5	5	4	9	1	4	5	11	10	9	3	18	7	5	(4)	2	(4)	-	-	-	-
Class A	143	9.84	-	-	-	-	-	-	-	-	-	-	-	1	3	15	15	11	4	28	11	8	1	3	1	-	-	-	-
Class C	41	7.75	-	-	-	-	-	-	29	27	17	22	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Inspectors	111	8.60	[5] 16	-	7	-	-	-	-	-	2	-	1	1	23	14	-	14	2	4	1	13	-	3	1	-	-	-	-
Class A	49	9.78	-	-	-	-	-	-	-	-	-	-	-	2	24	18	-	4	4	8	2	29	-	6	2	-	-	-	-
Class B	50	8.07	28	-	-	-	-	-	-	-	4	-	2	-	28	12	-	26	-	-	-	-	-	-	-	-	-	-	-
Janitors, porters, and cleaners	25	7.79	-	-	-	-	12	-	52	12	-	-	-	4	-	4	-	16	-	-	-	-	-	-	-	-	-	-	-
Mechanics, maintenance	64	10.64	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	13	6	17	-	6	5	2	45	3	-	-	-
Polishers and buffers, metal	7	8.13	-	-	-	-	-	-	-	57	-	14	-	-	-	14	-	-	14	-	-	-	-	-	-	-	-	-	-
Tool and die makers	39	10.81	-	-	-	-	-	-	-	-	-	-	-	-	-	15	-	5	-	3	-	5	18	10	31	-	-	3	10
Other than jobbing	32	10.73	-	-	-	-	-	-	-	-	-	-	-	-	-	19	-	6	-	3	-	-	13	13	38	-	-	3	6
Tool clerks	7	7.86	-	-	-	-	-	-	14	14	57	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Welders, hand	40	9.28	-	-	-	-	-	-	-	-	-	5	5	13	7	27	-	25	5	7	2	-	2	-	-	-	-	-	-
Class A	36	9.33	-	-	-	-	-	-	-	-	-	-	6	14	8	28	-	28	3	8	3	-	3	-	-	-	-	-	-

[1] The Worcester metropolitan area consists of the city of Worcester and 24 towns in Worcester County.

[2] Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

[3] Overall occupation may include data for subcategories not shown separately. Virtually all workers were time-workers.

[4] Less than 0.5 percent.

[5] Workers were distributed as follows: 1 percent at $4.75 and under $5; 4 percent at $5 and under $5.25; 2 percent at $5.25 and under $5.50; 8 percent at $5.50 and under $5.75; and 1 percent at $5.75 and under $6.

NOTE: Because of rounding, sums of individual items may not equal 100. Dashes indicate no data.

Table 33. Method of wage payment

(Percent of production workers in machinery manufacturing establishments by method of wage payment,[1] 23 metropolitan areas,[2] November 1983)

Method	Northeast								South				
	Boston	Buffalo	Hartford–New Britain–Bristol	Newark	New York	Philadelphia	Pittsburgh	Worcester	Atlanta	Baltimore	Dallas–Fort Worth	Houston	Tulsa
All workers	100	100	100	100	100	100	100	100	100	100	100	100	100
Time-rated workers	86	99	90	97	100	94	92	98	100	89	97	99	100
Formal plans	81	86	66	84	92	80	79	92	91	85	80	81	92
Single rate	4	48	23	12	6	19	37	–	60	6	11	10	–
Range of rates	77	38	43	71	86	62	42	92	31	79	69	71	92
Individual rates	5	13	24	14	8	14	13	6	9	4	17	18	8
Incentive workers	14	1	10	3	–	6	8	2	–	11	3	1	–
Individual piecework	6	–	4	–	–	4	–	2	–	11	–	–	–
Group piecework	1	–	–	–	–	1	6	–	–	–	3	–	–
Individual bonus	1	1	5	1	–	–	1	–	–	–	–	1	–
Group bonus	6	[3]	[3]	2	–	–	–	–	–	–	–	–	–

Method	North Central						West			
	Chicago	Cleveland	Detroit	Milwaukee	Minneapolis–St. Paul	St. Louis	Denver–Boulder	Los Angeles–Long Beach	Portland	San Francisco–Oakland
All workers	100	100	100	100	100	100	100	100	100	100
Time-rated workers	90	97	100	61	100	92	100	98	100	100
Formal plans	57	80	70	57	91	86	92	82	100	82
Single rate	9	36	32	14	43	20	6	4	74	65
Range of rates	48	45	38	43	49	67	87	79	26	17
Individual rates	33	17	30	4	9	6	8	16	–	18
Incentive workers	10	3	–	39	–	8	–	2	–	–
Individual piecework	9	–	–	4	–	2	–	–	–	–
Group piecework	1	[3]	–	–	–	2	–	–	–	–
Individual bonus	1	2	–	30	–	4	–	2	–	–
Group bonus	–	[3]	–	5	–	–	–	–	–	–

[1] For definition of method of wage payment, see appendix B.
[2] For definitions of areas, see individual area tables 2-32.
[3] Less than 0.5 percent.

NOTE: Because of rounding, sums of individual items may not equal totals. Dashes indicate no data.

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Table 34. Scheduled weekly hours

(Percent of production workers in machinery manufacturing establishments by scheduled weekly hours,[1] 23 metropolitan areas,[2] November 1983)

Weekly hours	Northeast								South				
	Boston	Buffalo	Hartford–New Britain–Bristol	Newark	New York	Philadelphia	Pittsburgh	Worcester	Atlanta	Baltimore	Dallas–Fort Worth	Houston	Tulsa
All workers	100	100	100	100	100	100	100	100	100	100	100	100	100
Under 37.5 hours	–	–	4	–	–	–	[3]	–	–	–	–	1	11
37.5 hours	–	–	–	–	6	10	–	5	–	23	–	–	–
Over 37.5 and under 40 hours	–	–	–	–	5	–	–	–	–	–	–	–	–
40 hours	100	97	80	84	74	85	92	91	96	76	91	85	88
Over 40 and under 45 hours	–	–	–	[3]	2	–	–	–	4	1	–	4	–
45 hours	–	3	6	2	4	5	8	1	–	–	4	10	1
Over 45 and under 48 hours	–	–	1	1	1	–	–	–	–	–	–	–	–
48 hours	–	–	–	–	–	[3]	–	2	–	–	5	–	–
Over 48 hours	–	–	9	13	9	–	–	1	–	–	–	–	–

Weekly hours	North Central						West			
	Chicago	Cleveland	Detroit	Milwaukee	Minneapolis–St. Paul	St. Louis	Denver–Boulder	Los Angeles–Long Beach	Portland	San Francisco–Oakland
All workers	100	100	100	100	100	100	100	100	100	100
Under 37.5 hours	2	–	2	–	–	3	2	–	–	3
37.5 hours	1	–	–	–	–	–	–	–	–	–
Over 37.5 and under 40 hours	–	–	–	–	–	–	–	–	–	–
40 hours	74	81	70	94	98	92	87	82	100	97
Over 40 and under 45 hours	[3]	–	–	2	–	5	–	2	–	–
45 hours	12	7	5	3	1	–	9	10	–	–
Over 45 and under 48 hours	2	–	1	–	–	–	–	–	–	–
48 hours	–	–	3	–	1	–	–	3	–	–
Over 48 hours	9	12	18	1	–	–	1	2	–	–

[1] Data relate to the predominant schedule for full-time day-shift workers in each establishment.
[2] For definitions of areas, see individual area tables 2-32.
[3] Less than 0.5 percent.

NOTE: Because of rounding, sums of individual items may not equal 100. Dashes indicate no data.

Table 35. Shift differential provisions

(Percent of production workers in machinery manufacturing establishments by shift differential provisions,[1] 23 metropolitan areas,[2] November 1983)

Shift differential	Northeast								South				
	Boston	Buffalo	Hartford-New Britain-Bristol	Newark	New York	Philadelphia	Pittsburgh	Worcester	Atlanta	Baltimore	Dallas-Fort Worth	Houston	Tulsa
Second shift													
Workers in establishments with second-shift provisions	94.9	88.4	79.5	87.3	46.6	84.0	92.8	96.7	44.8	78.1	78.7	92.5	84.8
With shift differential	94.9	88.4	79.5	87.3	46.6	84.0	92.3	96.7	42.2	78.1	78.7	91.8	81.2
Uniform cents per hour	5.1	75.3	15.7	30.7	24.7	16.2	61.9	29.9	26.1	17.8	71.2	83.7	58.7
5 cents	-	-	-	-	11.9	-	-	-	-	-	-	-	-
Over 5 and under 10 cents	-	-	-	-	-	-	-	-	-	-	-	-	-
10 cents	-	-	-	18.4	9	-	1.2	-	-	3.2	8.2	-	-
Over 10 and under 15 cents	-	-	-	-	-	-	1.3	-	-	-	4.9	-	-
15 cents	-	4.2	-	-	5.2	2.6	2.0	-	18.0	-	3.0	11.6	-
Over 15 and under 20 cents	-	-	-	-	-	-	-	-	-	-	6.1	2.7	-
20 cents	-	7.3	-	2.8	5.0	1.5	15.1	-	2.0	5.0	3.6	12.0	8.6
Over 20 and under 25 cents	-	-	-	7	-	-	10.4	-	-	-	-	-	13.7
25 cents	-	14.8	-	3.8	-	2.9	24.0	6.6	6.1	7.7	13.7	22.8	2.8
Over 25 and under 30 cents	-	-	-	-	-	-	-	-	-	-	-	1.9	2.2
30 cents	-	22.4	-	2.5	-	8.2	2.9	9.7	-	-	18.7	10.0	6.3
Over 30 and under 35 cents	-	-	-	-	-	-	-	-	-	-	-	-	-
35 cents	-	-	4.7	-	-	-	-	-	-	-	1.6	12.4	12.9
Over 35 and under 40 cents	-	-	-	-	-	-	-	-	-	-	-	1.7	-
40 cents	-	25.1	9	-	-	-	4.1	-	-	-	4.2	1.5	10.8
Over 40 and under 45 cents	5.1	-	-	-	-	-	-	-	-	-	-	-	-
45 cents	-	-	-	-	-	-	-	-	-	-	-	-	-
50 cents	-	1.6	3.6	2.5	-	3	-	-	-	1.9	8	2.4	-
Over 50 cents	-	-	6.5	-	1.8	-	-	13.5	-	-	6.5	4.7	1.4
Uniform percentage	89.8	13.1	63.9	50.4	21.8	67.8	30.5	66.9	16.1	55.8	6.8	8.1	22.5
4 percent	-	-	-	-	-	-	-	-	16.1	-	-	1.5	-
5 percent	-	5.7	16.8	1.7	-	-	3.7	-	-	23.4	-	-	7.2
6 percent	-	-	-	-	-	-	4.7	-	-	-	-	5.6	-
7 percent	-	6.5	19.9	-	-	1.0	-	-	-	-	-	-	-
8 percent	-	-	8.2	1.8	-	-	-	-	-	-	-	1.1	-
10 percent	84.1	8	12.2	38.6	15.0	66.8	22.0	64.8	-	31.6	2.0	-	15.3
11 percent	-	-	-	-	-	-	-	-	-	-	4.7	-	-
12 percent	1.6	-	-	-	3.2	-	-	2.1	-	-	-	-	-
12.5 percent	4.1	-	-	-	-	-	-	-	-	-	-	-	-
15 percent	-	-	7	8.3	3.5	-	-	-	-	8	-	-	-
20 percent	-	-	6.1	-	-	-	-	-	-	-	-	-	-
Other formal paid differential[3]	-	-	-	6.3	-	-	-	-	-	4.5	7	-	-

See footnotes at end of table.

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Table 35. Shift differential provisions—Continued

(Percent of production workers in machinery manufacturing establishments by shift differential provisions,[1] 23 metropolitan areas,[2] November 1983)

Shift differential	Northeast								South				
	Boston	Buffalo	Hartford–New Britain–Bristol	Newark	New York	Philadelphia	Pittsburgh	Worcester	Atlanta	Baltimore	Dallas–Fort Worth	Houston	Tulsa
Third shift													
Workers in establishments with third-shift provisions	80.4	82.8	59.8	68.8	27.8	49.7	75.7	87.0	15.1	63.3	39.7	68.7	63.6
With shift differential	80.4	82.8	59.8	68.8	27.8	49.7	75.7	87.0	12.4	63.3	39.7	68.7	63.6
Uniform cents per hour	5.1	63.1	12.2	28.8	19.8	4.4	52.9	23.2	12.4	12.7	18.7	58.7	50.5
Over 5 and under 10 cents	–	–	–	–	–	–	–	–	–	–	–	–	–
10 cents	–	–	–	17.0	11.9	–	–	–	–	–	–	–	–
15 cents	–	4.2	–	–	.9	–	2.5	–	10.4	–	–	–	–
20 cents	–	6.1	–	–	5.2	–	11.8	–	2.0	–	–	2.7	–
Over 20 and under 25 cents	–	–	–	–	–	–	–	–	–	–	–	2.7	–
25 cents	–	3.8	–	2.8	–	2.9	10.8	–	–	5.0	5.1	14.9	8.6
Over 25 and under 30 cents	–	–	–	–	–	–	4.6	–	–	–	–	–	–
30 cents	–	15.2	–	3.2	–	1.5	7.6	–	–	7.7	5.6	7.3	6.3
Over 30 and under 35 cents	–	–	–	–	–	–	5.8	–	–	–	–	1.9	–
35 cents	–	–	4.7	–	–	–	9.7	–	–	–	1.5	19.7	14.3
Over 35 and under 40 cents	–	–	–	2.7	–	–	–	–	–	–	–	–	15.8
40 cents	–	25.1	–	.6	–	–	–	9.7	–	–	–	6.0	5.4
Over 40 and under 45 cents	–	–	–	–	–	–	–	–	–	–	1.6	–	–
45 cents	–	–	–	–	–	–	–	–	–	–	–	1.2	–
Over 45 and under 50 cents	–	–	–	–	–	–	–	–	–	–	–	–	–
50 cents	–	8.7	1.0	2.5	–	–	–	–	–	–	–	2.3	–
Over 50 cents	5.1	–	6.5	–	1.8	–	–	13.5	–	–	5.0	–	–
Uniform percentage	75.3	12.3	44.9	28.5	8.1	42.7	22.7	63.8	–	30.6	1.8	7.0	10.4
5 percent	–	–	–	–	–	–	.7	–	–	–	–	–	4.6
6 percent	–	–	–	–	–	–	–	–	–	–	–	–	–
7 percent	–	5.7	–	–	–	–	–	–	–	–	–	–	–
8 percent	–	–	8.2	–	–	–	–	–	–	–	–	1.5	–
10 percent	46.1	6.5	36.7	24.3	2.0	39.0	15.2	35.7	–	28.0	–	–	4.4
12 percent	–	–	–	–	–	–	–	–	–	–	–	5.6	–
12.5 percent	4.1	–	–	–	6.1	–	–	–	–	–	–	–	–
13 percent	5.0	–	–	–	–	–	–	–	–	–	–	–	–
14 percent	–	–	–	–	–	–	–	–	–	–	–	–	1.4
15 percent	20.1	–	–	2.9	–	3.7	–	28.1	–	2.6	1.8	–	–
18 percent	–	–	–	–	–	–	–	–	–	–	–	–	–
20 percent	–	–	–	1.3	–	–	6.8	–	–	–	–	–	–
Other formal paid differential[3]	–	7.4	2.6	11.5	–	2.7	–	–	–	19.9	19.2	3.0	2.6

See footnotes at end of table.

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Table 35. Shift differential provisions—Continued

(Percent of production workers in machinery manufacturing establishments by shift differential provisions,[1] 23 metropolitan areas,[2] November 1983)

Shift differential	North Central						West			
	Chicago	Cleveland	Detroit	Milwaukee	Minneapolis-St. Paul	St. Louis	Denver-Boulder	Los Angeles-Long Beach	Portland	San Francisco-Oakland
Second shift										
Workers in establishments with second-shift provisions	82.1	84.2	74.2	90.1	96.6	95.4	92.1	87.2	98.3	76.0
With shift differential	68.8	83.8	73.1	89.8	96.6	90.5	92.1	87.1	98.3	76.0
Uniform cents per hour	49.9	72.9	36.0	61.5	87.3	63.6	21.4	65.2	10.3	50.1
5 cents	-	-	-	-	-	-	-	-	-	-
Over 5 and under 10 cents	1.0	-	-	-	-	-	-	-	-	-
10 cents	4.0	4.9	.8	-	-	1.7	-	-	-	-
Over 10 and under 15 cents	-	-	3.0	-	-	-	-	-	-	-
15 cents	4.9	4.4	2.4	.2	29.3	-	2.0	13.2	-	-
Over 15 and under 20 cents	5.5	-	-	.1	-	6.0	-	-	-	-
20 cents	4.6	4.1	.4	16.6	5.0	4.8	9.8	10.4	-	3.9
Over 20 and under 25 cents	1.2	5.5	.5	.4	-	-	-	-	-	5.6
25 cents	1.9	19.8	7.3	9.5	20.0	19.3	2.4	17.2	-	-
Over 25 and under 30 cents	-	2.6	-	-	-	2.1	-	1.0	-	-
30 cents	2.7	5.2	3.6	17.8	-	2.8	1.9	4.2	-	17.8
Over 30 and under 35 cents	3.0	-	-	-	-	5.0	-	-	-	-
35 cents	5.0	15.4	-	6.5	-	-	2.3	8.2	-	-
Over 35 and under 40 cents	2.7	-	-	-	20.6	-	-	-	-	-
40 cents	6.5	4.0	4.5	3.5	.6	1.6	3.0	8.4	4.9	-
Over 40 and under 45 cents	1.1	-	-	5.3	-	-	-	-	-	-
45 cents	5.6	5.9	.5	1.5	-	-	-	-	5.5	-
50 cents	-	-	9.2	-	10.5	4.8	-	2.5	-	-
Over 50 cents	.2	1.2	3.7	-	1.3	15.5	-	-	-	22.9
Uniform percentage	18.9	10.8	37.1	28.3	9.3	26.9	70.7	21.3	-	26.0
4 percent	-	-	-	-	-	-	-	-	-	-
5 percent	-	4.6	27.0	3.7	1.1	5.8	-	7.1	-	-
6 percent	1.9	1.1	2.4	6.3	1.8	-	-	2.5	-	-
7 percent	.5	3.4	-	18.4	-	-	39.3	-	-	-
8 percent	3.4	-	-	-	-	-	-	3.8	-	-
10 percent	11.5	1.7	5.9	-	6.5	21.0	30.8	7.9	-	11.8
11 percent	-	-	-	-	-	-	-	-	-	-
12 percent	-	-	-	-	-	-	.6	-	-	-
12.5 percent	-	-	1.8	-	-	-	-	-	-	-
15 percent	-	-	-	-	-	-	-	-	-	14.1
20 percent	1.6	-	-	-	-	-	-	-	-	-
Other formal paid differential[3]	-	-	-	-	-	-	-	.6	87.9	-

See footnotes at end of table.

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Table 35. Shift differential provisions—Continued

(Percent of production workers in machinery manufacturing establishments by shift differential provisions,[1] 23 metropolitan areas,[2] November 1983)

Shift differential	North Central						West			
	Chicago	Cleveland	Detroit	Milwaukee	Minneapolis-St. Paul	St. Louis	Denver-Boulder	Los Angeles-Long Beach	Portland	San Francisco-Oakland
Third shift										
Workers in establishments with third-shift provisions	63.9	46.6	47.0	81.6	82.9	83.0	84.2	61.8	55.1	67.1
With shift differential	53.4	46.6	47.0	81.6	82.9	78.2	84.2	61.7	55.1	67.1
Uniform cents per hour	40.4	40.5	9.8	56.7	79.8	54.4	16.0	22.4	-	13.0
Over 5 and under 10 cents	1.0	-	-	-	-	-	-	-	-	-
10 cents	-	-	-	-	-	1.7	-	-	-	-
15 cents	1.0	4.9	.8	-	7.5	-	2.0	2.4	-	-
20 cents	8.0	-	-	.1	14.7	3.0	-	-	-	-
Over 20 and under 25 cents	1.2	-	-	-	-	-	-	-	-	-
25 cents	5.5	-	-	7.5	9.6	25.3	7.1	2.5	-	-
Over 25 and under 30 cents	-	5.5	.5	.4	-	-	-	1.0	-	-
30 cents	-	4.5	.5	15.5	13.4	4.6	-	-	-	-
Over 30 and under 35 cents	-	-	-	-	-	5.0	-	-	-	5.6
35 cents	7.6	4.2	-	2.2	1.6	-	6.9	3.1	-	-
Over 35 and under 40 cents	-	7.0	-	-	-	-	-	-	-	-
40 cents	2.8	1.4	2.7	14.2	.6	1.6	-	6.1	-	7.5
Over 40 and under 45 cents	3.0	-	-	5.3	-	-	-	-	-	-
45 cents	5.6	8.6	1.6	1.5	-	-	-	-	-	-
Over 45 and under 50 cents	-	-	-	-	20.6	-	-	-	-	-
50 cents	4.6	1.8	2.2	10.1	8.3	1.0	-	1.8	-	-
Over 50 cents	.2	2.5	1.6	-	3.5	12.2	-	5.4	-	-
Uniform percentage	9.2	3.7	30.7	24.9	3.1	17.2	68.2	7.3	-	17.0
5 percent	-	.8	-	-	-	-	-	-	-	-
6 percent	1.9	-	-	-	-	-	-	-	-	-
7 percent	-	-	-	18.4	-	-	-	-	-	-
8 percent	-	-	-	2.8	-	-	-	-	-	-
10 percent	4.8	2.9	30.4	3.7	1.8	17.2	36.8	6.9	-	-
12 percent	-	-	-	-	1.3	-	-	-	-	-
12.5 percent	-	-	-	-	-	-	30.8	-	-	-
13 percent	2.4	-	-	-	-	-	-	-	-	-
14 percent	-	-	-	-	-	-	-	-	-	-
15 percent	-	-	.3	-	-	-	-	.4	-	2.9
18 percent	-	-	-	-	-	-	.6	-	-	-
20 percent	-	-	-	-	-	-	-	-	-	14.1
Other formal paid differential[3]	3.8	2.4	6.5	-	-	6.6	-	32.0	55.1	37.1

[1] Refers to policies of establishments currently operating late shifts or having provisions covering late shifts.

[2] For definitions of areas, see individual area tables 2-32.

[3] Provisions include full day's pay for reduced hours, plus cents-per-hour or percentage additions to the straight-time hourly rate.

NOTE: Because of rounding, sums of individual items may not equal totals. Dashes indicate no data.

Table 36. Shift differential practices

(Percent of production workers in machinery manufacturing establishments employed on late shifts by amount of pay differential, 23 metropolitan areas,[1] November 1983)

Shift differential	Northeast								South				
	Boston	Buffalo	Hartford–New Britain–Bristol	Newark	New York	Philadelphia	Pittsburgh	Worcester	Atlanta	Baltimore	Dallas–Fort Worth	Houston	Tulsa
Second shift													
Workers employed on second shift	14.7	12.0	5.7	12.0	5.2	9.5	13.9	12.2	6.2	15.5	10.8	12.6	7.9
Receiving differential	14.7	12.0	5.7	12.0	5.2	9.5	13.8	12.2	5.8	15.5	10.8	12.6	7.8
Uniform cents per hour	.5	9.0	2.4	5.2	3.2	1.3	11.0	2.3	3.1	1.7	10.8	10.6	6.1
5 cents	–	–	–	–	2.0	–	–	–	–	–	–	–	–
10 cents	–	–	–	3.4	–	–	–	–	–	–	1.3	–	–
Over 10 and under 15 cents	–	–	–	–	–	–	–	–	–	–	1.1	–	–
15 cents	–	–	–	–	1.1	.6	.6	–	2.7	–	–	1.3	–
Over 15 and under 20 cents	–	–	–	–	–	–	–	–	–	–	.8	.3	–
20 cents	–	–	–	.3	–	–	4.7	–	–	1.2	.2	1.5	1.8
Over 20 and under 25 cents	–	–	–	.2	–	–	1.2	–	–	–	–	–	–
25 cents	–	–	–	.4	–	–	4.2	–	.5	.5	2.6	1.6	.1
Over 25 and under 30 cents	–	–	–	–	–	–	–	–	–	–	–	.4	.2
30 cents	–	6.4	–	.7	–	.5	.4	.5	–	–	1.8	.7	–
Over 30 and under 35 cents	–	–	–	–	–	–	–	–	–	–	–	–	–
35 cents	–	–	1.4	–	–	–	–	–	–	–	.2	4.2	3.4
Over 35 and under 40 cents	–	–	–	–	–	–	–	–	–	–	–	.4	–
40 cents	–	2.1	–	–	–	–	–	–	–	–	.7	–	.3
Over 40 and under 45 cents	.5	–	–	–	–	–	–	–	–	–	–	–	–
45 cents	–	–	–	–	–	–	–	–	–	–	–	–	–
50 cents	–	.5	.6	.1	–	.2	–	–	–	–	–	–	–
Over 50 cents	–	–	.4	–	.2	–	–	1.8	–	–	2.0	.3	.4
Uniform percentage	14.2	3.0	3.3	6.2	2.0	8.2	2.7	9.9	2.7	12.9	–	1.9	1.7
4 percent	–	–	–	–	–	–	–	–	2.7	–	–	.5	–
5 percent	–	1.3	–	–	–	–	–	–	–	7.4	–	–	.4
6 percent	–	–	–	–	–	–	–	–	–	–	–	1.5	–
7 percent	–	1.7	3.0	–	–	.2	–	–	–	–	–	–	–
8 percent	–	–	–	.3	–	–	–	–	–	–	–	–	–
10 percent	13.6	–	.1	5.9	1.2	8.0	2.7	9.6	–	5.4	–	–	1.4
12 percent	.4	–	–	–	.5	–	–	.3	–	–	–	–	–
12.5 percent	.2	–	–	–	–	–	–	–	–	–	–	–	–
15 percent	–	–	–	(2)	.3	–	–	–	–	.1	–	–	–
20 percent	–	–	.1	–	–	–	–	–	–	–	–	–	–
Other formal paid differential[3]	–	–	–	.6	–	–	–	–	–	.9	–	–	–

See footnotes at end of table.

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Table 36. Shift differential practices—Continued

(Percent of production workers in machinery manufacturing establishments employed on late shifts by amount of pay differential, 23 metropolitan areas,[1] November 1983)

Shift differential	Northeast								South				
	Boston	Buffalo	Hartford–New Britain–Bristol	Newark	New York	Philadelphia	Pittsburgh	Worcester	Atlanta	Baltimore	Dallas–Fort Worth	Houston	Tulsa
Third shift													
Workers employed on third shift	4.5	1.8	0.5	3.0	2.5	2.4	5.2	1.4	0.2	4.8	0.5	1.9	2.0
Receiving differential	4.5	1.8	.5	3.0	2.5	2.4	5.2	1.4	–	4.8	.5	1.9	2.0
Uniform cents per hour	.1	1.5	–	2.0	2.2	–	2.5	.5	–	.4	.2	1.7	1.9
10 cents	–	–	–	2.0	1.3	–	–	–	–	–	–	–	–
20 cents	–	–	–	–	.8	–	.6	–	–	–	–	–	–
25 cents	–	–	–	.1	–	–	–	–	–	.4	–	1.0	–
Over 25 and under 30 cents	–	–	–	–	–	–	–	–	–	–	–	–	–
30 cents	–	1.1	–	–	–	–	.7	–	–	–	.1	–	–
Over 30 and under 35 cents	–	–	–	–	–	–	1.1	–	–	–	–	.1	–
35 cents	–	–	–	–	–	–	–	–	–	–	.1	.4	1.7
Over 35 and under 40 cents	–	–	–	–	–	–	–	–	–	–	–	–	.2
40 cents	–	–	–	–	–	–	–	–	–	–	–	.1	–
Over 40 and under 45 cents	–	–	–	–	–	–	–	–	–	–	–	–	–
45 cents	–	–	–	–	–	–	–	–	–	–	–	–	–
Over 45 and under 50 cents	–	–	–	–	–	–	–	–	–	–	–	–	–
50 cents	–	.4	–	–	–	–	–	–	–	–	–	.1	–
Over 50 cents	.1	–	–	–	.1	–	–	.5	–	–	–	–	–
Uniform percentage	4.3	.4	.5	1.0	.3	2.4	2.7	.9	–	3.6	–	.1	.1
5 percent	–	–	–	–	–	–	–	–	–	–	–	–	–
6 percent	–	–	–	–	–	–	–	–	–	–	–	–	–
7 percent	–	.4	–	–	–	–	–	–	–	–	–	–	–
8 percent	–	–	–	–	–	–	–	–	–	–	–	–	–
10 percent	3.0	–	.5	1.0	–	2.3	2.7	.5	–	3.6	–	–	.1
12 percent	–	–	–	–	–	–	–	–	–	–	–	–	–
12.5 percent	–	–	–	–	.3	–	–	–	–	–	–	–	–
13 percent	.7	–	–	–	–	–	–	–	–	–	–	–	–
14 percent	–	–	–	–	–	–	–	–	–	–	–	–	–
15 percent	.6	–	–	–	–	.2	–	.4	–	–	–	–	–
18 percent	–	–	–	–	–	–	–	–	–	–	–	–	–
20 percent	–	–	–	–	–	–	–	–	–	–	–	–	–
Other formal paid differential[2]	–	–	–	.1	–	–	–	–	–	.7	.3	.1	–

See footnotes at end of table.

Table 36. Shift differential practices—Continued

(Percent of production workers in machinery manufacturing establishments employed on late shifts by amount of pay differential, 23 metropolitan areas,[1] November 1983)

Shift differential	North Central						West			
	Chicago	Cleveland	Detroit	Milwaukee	Minneapolis-St. Paul	St. Louis	Denver-Boulder	Los Angeles-Long Beach	Portland	San Francisco-Oakland
Second shift										
Workers employed on second shift	15.7	11.9	12.8	14.6	17.0	11.3	14.2	12.3	7.7	8.4
Receiving differential	14.2	11.8	12.5	14.5	17.0	11.0	14.2	12.3	7.7	8.4
Uniform cents per hour	11.8	10.6	5.1	9.9	15.1	9.0	3.5	9.1	.9	2.5
5 cents	–	–	–	–	–	–	–	–	–	–
10 cents	1.4	–	–	–	–	–	–	–	–	–
Over 10 and under 15 cents	–	–	1.4	–	–	–	–	–	–	–
15 cents	–	–	(2)	–	–	–	–	–	–	–
Over 15 and under 20 cents	1.6	–	–	–	4.0	–	–	2.5	–	–
20 cents	1.4	.9	.1	3.9	.7	.2	–	–	–	–
Over 20 and under 25 cents	.1	1.4	.1	–	–	.9	2.1	1.8	–	–
25 cents	.2	.7	.5	.6	4.3	–	–	–	–	.2
Over 25 and under 30 cents	–	–	–	–	–	4.7	.7	1.3	–	–
30 cents	.2	.8	.5	.9	–	.1	–	.3	–	–
Over 30 and under 35 cents	1.2	–	–	–	–	.8	.6	.5	–	2.3
35 cents	1.5	4.4	–	1.5	–	–	–	–	–	–
Over 35 and under 40 cents	.5	–	–	–	–	–	.1	.9	–	–
40 cents	1.5	.5	.6	.8	3.5	–	–	–	–	–
Over 40 and under 45 cents	.1	–	–	1.7	–	.4	–	1.2	–	–
45 cents	2.0	1.9	–	.5	–	–	–	–	–	–
50 cents	–	–	.9	–	2.2	1.1	–	–	.9	–
Over 50 cents	(2)	–	.9	–	.3	.7	–	.6	–	–
Uniform percentage	2.5	1.2	7.4	4.6	2.0	1.9	10.7	3.1	–	6.0
4 percent	–	–	–	–	–	–	–	–	–	–
5 percent	–	.2	6.3	.1	.2	.3	–	.5	–	–
6 percent	.4	–	–	.4	.2	–	–	.2	–	–
7 percent	.1	.6	–	4.1	–	–	3.4	–	–	–
8 percent	.7	–	–	–	–	–	–	.6	–	–
10 percent	1.3	.3	1.1	–	1.6	1.7	7.3	1.8	–	1.7
12 percent	–	–	–	–	–	–	–	–	–	–
12.5 percent	–	–	–	–	–	–	–	–	–	–
15 percent	–	–	–	–	–	–	–	–	–	4.3
20 percent	–	–	–	–	–	–	–	–	–	–
Other formal paid differential[3]	–	–	–	–	–	–	–	(2)	6.8	–

See footnotes at end of table.

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Table 36. Shift differential practices—Continued

(Percent of production workers in machinery manufacturing establishments employed on late shifts by amount of pay differential, 23 metropolitan areas,[1] November 1983)

Shift differential	North Central						West			
	Chicago	Cleveland	Detroit	Milwaukee	Minneapolis-St. Paul	St. Louis	Denver-Boulder	Los Angeles-Long Beach	Portland	San Francisco-Oakland
Third shift										
Workers employed on third shift	5.0	2.3	0.5	3.0	2.7	1.0	4.5	0.9	1.0	-
Receiving differential	3.8	2.3	.5	3.0	2.7	.6	4.5	.9	1.0	-
Uniform cents per hour	3.3	2.2	.1	2.1	2.7	.6	4	.5	-	-
10 cents	-	-	-	-	-	-	-	-	-	-
20 cents	.1	-	-	-	.8	-	-	-	-	-
25 cents	.6	-	-	.7	.2	.6	-	-	-	-
Over 25 and under 30 cents	-	-	-	-	-	-	-	-	-	-
30 cents	-	-	-	.3	.3	-	-	-	-	-
Over 30 and under 35 cents	-	-	-	-	-	-	-	-	-	-
35 cents	.7	-	-	(2)	.1	-	-	-	-	-
Over 35 and under 40 cents	-	.1	-	-	-	-	.4	-	-	-
40 cents	.2	-	-	-	-	-	-	-	-	-
Over 40 and under 45 cents	.6	-	-	-	-	-	-	.5	-	-
45 cents	.1	.1	(2)	.1	-	-	-	-	-	-
Over 45 and under 50 cents	-	-	-	.3	-	-	-	-	-	-
50 cents	-	(2)	-	-	.1.0	-	-	-	-	-
Over 50 cents	-	-	.1	.7	.4	-	-	-	-	-
Uniform percentage	.5	-	-	-	(2)	-	-	-	-	-
5 percent	-	-	.4	.9	(2)	(2)	.4.1	-	-	-
6 percent	.1	-	-	-	-	-	-	-	-	-
7 percent	-	-	-	-	-	-	-	-	-	-
8 percent	-	-	-	.9	-	-	-	-	-	-
10 percent	.2	-	-	(2)	-	-	-	-	-	-
12 percent	-	-	.4	-	(2)	(2)	.2.2	-	-	-
12.5 percent	-	-	-	-	-	-	-	-	-	-
13 percent	.2	-	-	-	-	-	.1.9	-	-	-
14 percent	-	-	-	-	-	-	-	-	-	-
15 percent	-	-	-	-	-	-	-	-	-	-
18 percent	-	-	-	-	-	-	-	-	-	-
20 percent	-	-	-	-	-	-	-	-	-	-
Other formal paid differential[3]	(2)	.1	-	-	-	-	-	-	-	-
							-	.4	1.0	-

[1] For definitions of areas, see individual area tables 2-32.

[2] Less than 0.05 percent.

[3] Provisions include full day's pay for reduced hours, plus cents-per-hour or percentage additions to the straight-time hourly rate.

NOTE: Because of rounding, sums of individual items may not equal totals. Dashes indicate no data.

Table 37. Paid holidays

(Percent of production workers in machinery manufacturing establishments with formal provisions for paid holidays, 23 metropolitan areas,[1] November 1963)

Number of paid holidays	Northeast								South				
	Boston	Buffalo	Hartford–New Britain–Bristol	Newark	New York	Philadelphia	Pittsburgh	Worcester	Atlanta	Baltimore	Dallas–Fort Worth	Houston	Tulsa
All workers	100	100	100	100	100	100	100	100	100	100	100	100	100
Workers in establishments providing paid holidays	100	99	100	100	100	100	100	100	100	100	100	100	100
2 days	–	–	–	–	–	–	[2]	–	–	–	–	–	–
5 days	–	–	–	–	–	–	–	–	7	–	1	–	–
6 days	–	–	–	–	–	1	–	–	3	3	4	2	1
6 days plus 1 half day	–	–	–	–	–	2	–	–	–	–	–	–	–
6 days plus 2 half days	–	–	–	–	–	–	–	–	–	[2]	–	[2]	–
6 days plus 3 half days	–	–	–	–	–	–	7	–	–	–	–	–	–
7 days	–	4	6	–	4	–	–	–	15	–	4	3	4
7 days plus 1 half day	–	–	–	–	–	4	–	–	–	–	–	–	4
7 days plus 2 half days	–	–	–	–	–	–	1	–	–	–	–	–	–
7 days plus 3 half days	–	–	–	–	–	–	–	–	–	–	–	–	–
8 days	1	4	11	19	1	1	6	1	12	–	14	6	7
8 days plus 1 half day	–	–	–	–	[2]	–	–	–	–	–	–	–	–
8 days plus 2 half days	–	–	–	1	1	–	–	–	–	1	–	3	–
8 days plus 4 half days	–	–	–	–	–	–	–	–	–	–	–	–	–
9 days	–	–	7	3	4	9	5	2	39	5	28	14	18
9 days plus 1 half day	–	–	1	1	–	1	–	7	–	9	–	3	–
9 days plus 2 half days	–	–	–	–	–	–	–	–	–	–	1	–	–
10 days	59	22	5	29	22	38	29	36	19	36	17	24	50
10 days plus 1 half day	7	–	1	1	–	–	–	11	–	3	5	–	–
10 days plus 2 half days	–	–	–	2	–	2	–	–	–	–	–	–	–
11 days	23	21	2	18	12	21	21	29	5	23	15	42	17
11 days plus 1 half day	2	–	–	1	10	–	–	–	–	–	–	–	–
11 days plus 2 half days	2	–	–	–	–	–	–	–	–	–	–	–	–
12 days	2	46	21	8	17	18	30	5	–	–	4	2	–
12 days plus 1 half day	–	–	–	1	–	–	–	–	–	–	–	–	–
12 days plus 2 half days	–	–	5	–	21	–	–	–	–	–	–	–	–
13 days	4	4	12	12	[2]	2	–	10	–	20	6	1	–
13 days plus 1 half day	–	–	–	–	–	–	–	–	–	–	–	–	–
14 days	–	–	29	5	6	–	–	–	–	–	–	–	–
15 days	–	–	–	–	–	–	–	–	–	–	–	–	–
16 days	–	–	–	–	–	–	–	–	–	–	–	–	–
18 days	–	–	–	–	–	–	–	–	–	–	–	–	–

See footnotes at end of table.

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Table 37. Paid holidays—Continued

(Percent of production workers in machinery manufacturing establishments with formal provisions for paid holidays, 23 metropolitan areas,[1] November 1983)

Number of paid holidays	North Central						West			
	Chicago	Cleveland	Detroit	Milwaukee	Minneapolis-St. Paul	St. Louis	Denver-Boulder	Los Angeles-Long Beach	Portland	San Francisco-Oakland
All workers	100	100	100	100	100	100	100	100	100	100
Workers in establishments providing paid holidays	100	100	100	100	100	100	100	100	100	100
2 days	–	–	–	–	–	–	–	–	–	–
5 days	–	–	–	–	–	–	–	–	–	–
6 days	7	9	8	[2]	5	5	3	5	–	–
6 days plus 1 half day	1	[2]	–	–	–	–	–	–	–	–
6 days plus 2 half days	1	1	2	–	–	–	–	2	–	–
6 days plus 3 half days	–	–	–	–	–	–	–	–	–	–
7 days	[2]	1	3	1	[2]	–	1	5	–	–
7 days plus 1 half day	[2]	3	–	–	[2]	–	–	1	–	–
7 days plus 2 half days	1	[2]	2	1	–	–	–	–	–	–
7 days plus 3 half days	3	2	[2]	–	–	–	–	–	–	–
8 days	12	–	3	–	1	1	7	5	8	4
8 days plus 1 half day	2	[2]	–	–	[2]	–	–	[2]	–	–
8 days plus 2 half days	–	[2]	–	[2]	–	–	–	–	–	–
8 days plus 4 half days	–	[2]	–	–	–	–	–	–	–	–
9 days	10	2	5	6	10	4	7	14	20	3
9 days plus 1 half day	2	–	–	1	–	–	–	–	–	–
9 days plus 2 half days	–	–	–	–	–	–	–	–	–	–
10 days	18	23	13	7	66	25	47	15	61	28
10 days plus 1 half day	–	–	–	–	–	–	–	–	–	–
10 days plus 2 half days	–	–	–	–	–	3	–	1	–	–
11 days	20	16	6	10	15	35	33	24	5	34
11 days plus 1 half day	–	–	–	–	–	–	–	2	–	–
11 days plus 2 half days	–	–	–	–	–	–	–	1	–	–
12 days	4	14	31	27	2	20	2	20	5	31
12 days plus 1 half day	–	–	1	–	–	–	–	–	–	–
12 days plus 2 half days	–	5	–	–	–	–	–	–	–	–
13 days	12	14	11	37	–	7	–	–	–	–
13 days plus 1 half day	–	–	–	–	–	–	–	5	–	–
14 days	1	3	11	10	–	–	–	–	–	–
15 days	–	–	1	–	–	–	–	–	–	–
16 days	–	–	2	–	–	–	–	–	–	–
18 days	6	6	–	1	–	–	–	–	–	–

[1] For definitions of areas, see individual area tables 2-32.
[2] Less than 0.5 percent.

NOTE: Because of rounding, sums of individual items may not equal totals. Dashes indicate no data.

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Table 38. Paid vacations

(Percent of production workers in machinery manufacturing establishments with formal provisions for paid vacations after selected periods of service, 23 metropolitan areas,[1] November 1983)

Vacation policy	Northeast								South				
	Boston	Buffalo	Hartford-New Britain-Bristol	Newark	New York	Philadelphia	Pittsburgh	Worcester	Atlanta	Baltimore	Dallas-Fort Worth	Houston	Tulsa
All workers	100	100	100	100	100	100	100	100	100	100	100	100	100
Method of payment													
Workers in establishments providing paid vacations	100	99	100	100	100	100	100	100	100	100	100	100	100
Length-of-time payment	96	82	87	94	100	99	88	76	81	100	94	100	98
Percentage payment	4	18	13	6	–	1	12	24	19	–	6	–	2
Other	–	–	–	–	–	–	–	–	–	–	–	–	–
Amount of vacation pay[2]													
After 6 months of service:													
Under 1 week	3	21	30	33	45	30	11	31	–	33	12	7	7
1 week	57	17	38	15	22	31	–	53	24	20	18	17	19
Over 1 and under 2 weeks	10	–	–	10	1	4	–	5	–	–	4	1	–
2 weeks	8	–	2	–	–	8	6	–	–	–	6	–	–
Over 2 and under 3 weeks	–	–	–	–	–	–	–	–	–	–	–	–	–
After 1 year of service:													
Under 1 week	–	3	–	–	–	–	–	–	–	–	–	–	2
1 week	28	67	20	44	65	61	72	18	76	79	60	64	47
Over 1 and under 2 weeks	–	8	37	10	4	1	11	–	–	(3)	–	–	–
2 weeks	72	22	43	46	31	38	17	82	24	21	40	36	51
Over 2 and under 3 weeks	–	–	–	–	–	–	–	–	–	–	–	–	–
3 weeks	–	–	–	–	(3)	–	–	–	–	–	(3)	–	–
Over 3 and under 4 weeks	–	–	–	–	–	–	–	–	–	–	–	–	–
4 weeks	–	–	–	–	–	–	–	–	–	–	–	–	–
After 2 years of service:													
Under 1 week	–	3	–	–	–	–	–	–	–	–	–	–	–
1 week	1	61	5	7	1	11	40	1	22	21	11	1	2
Over 1 and under 2 weeks	1	14	36	4	20	23	9	–	1	2	–	(3)	–
2 weeks	93	22	56	81	66	61	44	99	77	77	89	99	98
Over 2 and under 3 weeks	4	–	3	7	13	5	7	–	–	–	–	–	–
3 weeks	–	–	–	–	(3)	–	–	–	–	–	(3)	–	–
Over 3 and under 4 weeks	–	–	–	–	–	–	–	–	–	–	–	–	–
4 weeks	–	–	–	–	–	–	–	–	–	–	–	–	–
After 3 years of service:													
1 week	1	–	1	1	(3)	6	(3)	–	1	16	3	–	2
Over 1 and under 2 weeks	1	13	4	2	1	20	6	–	1	2	–	(3)	–
2 weeks	87	83	67	68	73	69	78	100	98	83	97	99	98
Over 2 and under 3 weeks	11	4	28	6	26	5	15	–	–	–	–	–	1
3 weeks	–	–	–	23	(3)	–	–	–	–	–	(3)	–	–
Over 3 and under 4 weeks	–	–	–	–	–	–	–	–	–	–	–	–	–
4 weeks	–	–	–	–	–	–	–	–	–	–	–	–	–

See footnotes at end of table.

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Table 38. Paid vacations—Continued

(Percent of production workers in machinery manufacturing establishments with formal provisions for paid vacations after selected periods of service, 23 metropolitan areas,[1] November 1983)

Vacation policy	Northeast								South				
	Boston	Buffalo	Hartford-New Britain-Bristol	Newark	New York	Philadelphia	Pittsburgh	Worcester	Atlanta	Baltimore	Dallas-Fort Worth	Houston	Tulsa
Amount of vacation pay[2]—Continued													
After 4 years of service:													
1 week	1	–	1	1	[3]	5	[3]	–	1	11	3	–	2
Over 1 and under 2 weeks	–	7	4	2	1	20	6	–	1	2	–	[3]	–
2 weeks	88	89	67	66	73	70	75	100	98	83	97	100	98
Over 2 and under 3 weeks	11	4	29	8	19	5	15	–	–	4	–	–	1
3 weeks	–	–	–	23	8	–	3	–	–	–	[3]	–	–
Over 3 and under 4 weeks	–	–	–	–	–	–	–	–	–	–	–	–	–
4 weeks	–	–	–	–	–	–	–	–	–	–	–	–	–
After 5 years of service:													
1 week	–	–	–	–	–	–	–	–	–	–	[3]	–	2
Over 1 and under 2 weeks	–	–	1	1	–	11	–	–	1	–	–	[3]	–
2 weeks	35	77	40	43	47	49	64	87	83	79	83	83	83
Over 2 and under 3 weeks	27	12	42	15	26	12	23	–	1	4	–	1	6
3 weeks	37	11	17	41	19	28	13	13	15	17	16	15	9
Over 3 and under 4 weeks	–	–	–	–	7	–	–	–	–	–	–	[3]	–
4 weeks	–	–	–	–	–	–	–	–	–	–	–	–	–
Over 4 and under 5 weeks	–	–	–	–	–	–	–	–	–	–	–	–	–
After 8 years of service:													
1 week	–	–	–	–	–	–	–	–	–	–	–	–	–
Over 1 and under 2 weeks	–	–	–	–	–	–	–	–	–	–	[3]	–	2
2 weeks	3	30	28	17	30	22	20	32	80	20	49	45	37
Over 2 and under 3 weeks	19	33	45	20	23	35	42	5	5	28	10	3	11
3 weeks	68	37	24	59	31	43	31	63	15	52	41	52	50
Over 3 and under 4 weeks	10	–	3	3	16	–	4	–	–	–	–	[3]	–
4 weeks	–	–	–	[3]	–	–	3	–	–	–	–	–	–
Over 4 and under 5 weeks	–	–	–	–	–	–	–	–	–	–	–	–	–
After 10 years of service:													
1 week	–	–	–	–	–	–	–	–	–	–	–	–	–
Over 1 and under 2 weeks	–	–	–	–	–	–	–	–	–	–	–	–	2
2 weeks	1	–	6	3	5	8	[3]	2	49	4	25	7	12
Over 2 and under 3 weeks	1	4	1	4	2	5	7	–	3	–	–	–	5
3 weeks	66	82	65	85	69	62	57	91	46	93	59	86	81
Over 3 and under 4 weeks	15	4	28	6	9	13	17	–	–	–	6	[3]	–
4 weeks	17	10	[3]	1	15	12	19	8	3	3	10	6	[3]
Over 4 and under 5 weeks	–	–	–	1	–	–	–	–	–	–	–	–	–
5 weeks	–	–	–	–	–	–	–	–	–	–	–	[3]	–

See footnotes at end of table.

Table 38. Paid vacations—Continued

(Percent of production workers in machinery manufacturing establishments with formal provisions for paid vacations after selected periods of service, 23 metropolitan areas,[1] November 1983)

Vacation policy	Northeast								South				
	Boston	Buffalo	Hartford-New Britain-Bristol	Newark	New York	Philadelphia	Pittsburgh	Worcester	Atlanta	Baltimore	Dallas-Fort Worth	Houston	Tulsa
Amount of vacation pay[2]—Continued													
After 12 years of service:													
1 week	-	-	-	-	-	-	-	-	-	-	-	-	-
Over 1 and under 2 weeks	-	-	-	-	-	-	-	-	-	-	-	-	2
2 weeks	[3]	-	6	3	5	7	[3]	2	20	4	25	7	12
Over 2 and under 3 weeks	1	4	1	4	2	1	7	-	3	-	-	-	-
3 weeks	63	67	65	79	60	55	55	91	64	63	52	82	82
Over 3 and under 4 weeks	18	19	28	13	8	21	19	-	10	28	10	[3]	4
4 weeks	17	10	1	1	24	17	19	8	3	6	13	10	[3]
Over 4 and under 5 weeks	-	-	-	1	-	-	-	-	-	-	-	-	-
5 weeks	-	-	-	-	-	-	-	-	-	-	-	[3]	-
After 15 years of service:													
1 week	-	-	-	-	-	-	-	-	-	-	-	-	-
Over 1 and under 2 weeks	-	-	-	-	-	-	-	-	-	-	-	-	-
2 weeks	[3]	-	6	2	5	3	[3]	1	9	2	15	7	9
Over 2 and under 3 weeks	1	-	-	-	2	-	7	-	-	-	-	-	-
3 weeks	31	14	27	50	47	31	15	36	74	46	38	66	63
Over 3 and under 4 weeks	9	55	39	10	10	25	21	-	3	13	6	1	9
4 weeks	58	31	28	34	35	39	36	63	14	40	41	25	19
Over 4 and under 5 weeks	-	-	-	3	1	-	14	-	-	-	-	-	-
5 weeks	-	-	-	1	-	3	6	-	-	-	-	[3]	-
Over 5 and under 6 weeks	-	-	-	-	-	-	-	-	-	-	-	-	-
Over 6 and under 7 weeks	-	-	-	-	-	-	-	-	-	-	-	-	-
After 20 years of service:													
1 week	-	-	-	-	-	-	-	-	-	-	-	-	-
Over 1 and under 2 weeks	-	-	-	-	-	-	-	-	-	-	-	-	-
2 weeks	[3]	-	6	2	5	3	[3]	1	9	2	15	7	8
Over 2 and under 3 weeks	1	-	-	-	2	-	7	-	-	-	-	-	2
3 weeks	14	6	9	33	17	15	4	1	52	16	15	17	13
Over 3 and under 4 weeks	-	-	-	1	6	6	-	-	-	-	-	-	-
4 weeks	53	70	49	40	59	43	47	83	28	78	60	73	74
Over 4 and under 5 weeks	5	17	16	6	4	10	15	-	3	4	-	-	-
5 weeks	26	7	21	17	7	24	15	15	8	-	10	2	4
Over 5 and under 6 weeks	-	-	-	1	-	-	7	-	-	-	-	-	-
6 weeks	-	-	-	-	-	-	4	-	-	-	-	-	-
Over 6 and under 7 weeks	-	-	-	-	-	-	-	-	-	-	-	-	-
Over 7 weeks	-	-	-	-	-	-	-	-	-	-	-	-	-

See footnotes at end of table.

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Table 38. Paid vacations—Continued

(Percent of production workers in machinery manufacturing establishments with formal provisions for paid vacations after selected periods of service, 23 metropolitan areas,[1] November 1983)

Vacation policy	Northeast								South				
	Boston	Buffalo	Hartford-New Britain-Bristol	Newark	New York	Philadelphia	Pittsburgh	Worcester	Atlanta	Baltimore	Dallas-Fort Worth	Houston	Tulsa
Amount of vacation pay[2]—Continued													
After 25 years of service:													
1 week	–	–	–	–	–	–	–	–	–	–	–	–	–
Over 1 and under 2 weeks	–	–	–	–	–	–	–	–	–	–	–	–	–
2 weeks	–	–	6	1	5	3	[3]	1	9	2	15	7	8
Over 2 and under 3 weeks	1	–	–	–	2	–	7	–	–	–	–	–	2
3 weeks	14	6	8	33	17	15	–	1	38	16	10	17	13
Over 3 and under 4 weeks	–	–	–	–	5	6	–	–	–	–	–	–	–
4 weeks	33	30	19	27	58	34	28	34	40	20	46	42	53
Over 4 and under 5 weeks	–	–	14	7	–	–	7	–	–	5	6	–	–
5 weeks	51	60	54	28	13	33	40	55	3	57	19	34	25
Over 5 and under 6 weeks	–	4	–	3	–	9	8	–	10	–	–	–	–
6 weeks	–	–	–	–	–	–	10	10	–	–	4	–	–
Over 6 and under 7 weeks	–	–	–	–	–	–	–	–	–	–	–	–	–
Over 7 weeks	–	–	–	–	–	–	–	–	–	–	–	–	–
After 30 years of service:													
1 week	–	–	–	–	–	–	–	–	–	–	–	–	–
Over 1 and under 2 weeks	–	–	–	–	–	–	–	–	–	–	–	–	–
2 weeks	–	–	6	1	5	3	[3]	1	9	2	15	7	8
Over 2 and under 3 weeks	1	–	–	–	2	–	7	–	–	–	–	–	2
3 weeks	14	6	8	32	17	15	–	1	38	16	10	17	13
Over 3 and under 4 weeks	–	–	–	–	5	6	–	–	–	–	–	–	–
4 weeks	29	24	13	28	49	34	20	16	40	20	46	41	53
Over 4 and under 5 weeks	–	–	15	5	–	–	7	–	–	–	–	–	–
5 weeks	36	56	57	14	22	20	22	72	3	27	25	34	11
Over 5 and under 6 weeks	–	8	2	3	–	9	14	–	10	–	–	–	–
6 weeks	19	7	–	17	–	14	27	10	–	36	4	[3]	14
Over 6 and under 7 weeks	–	–	–	–	–	1	4	–	–	–	–	–	–
Over 7 weeks	–	–	–	–	–	–	–	–	–	–	–	–	–
Maximum vacation:													
1 week	–	–	–	–	–	–	–	–	–	–	–	–	–
Over 1 and under 2 weeks	–	–	–	–	–	–	–	–	–	–	–	–	–
2 weeks	–	–	6	1	5	3	[3]	1	9	2	15	7	8
Over 2 and under 3 weeks	1	–	–	–	2	–	7	–	–	–	–	–	2
3 weeks	14	6	8	32	17	15	–	1	38	16	10	17	13
Over 3 and under 4 weeks	–	–	–	–	5	6	–	–	–	–	–	–	–
4 weeks	29	24	13	27	49	34	20	16	40	20	46	41	53
Over 4 and under 5 weeks	–	–	15	5	–	–	7	–	–	–	–	–	–
5 weeks	36	56	57	14	22	20	19	48	3	27	25	34	11
Over 5 and under 6 weeks	–	8	2	3	–	9	14	–	10	–	–	–	–
6 weeks	19	7	–	17	–	14	29	34	–	36	4	[3]	–
Over 6 and under 7 weeks	–	–	–	–	–	–	–	–	–	–	–	–	–
7 weeks	–	–	–	–	–	–	4	–	–	–	–	–	–
Over 7 weeks	–	–	–	–	–	1	–	–	–	–	–	–	14

See footnotes at end of table.

ıble 38. Paid vacations—Continued

'ercent of production workers in machinery manufacturing establishments with formal provisions for paid vacations after selected periods of service, 23 metropolitan areas,' November 1983)

Vacation policy	North Central						West			
	Chicago	Cleveland	Detroit	Milwaukee	Minneapolis-St. Paul	St. Louis	Denver-Boulder	Los Angeles-Long Beach	Portland	San Francisco-Oakland
All workers	100	100	100	100	100	100	100	100	100	100
Method of payment										
Workers in establishments providing paid vacations	100	100	99	100	100	100	100	100	100	100
Length-of-time payment	84	91	77	80	100	99	100	100	100	80
Percentage payment	14	9	23	20	–	1	–	–	–	20
Other	2	–	–	–	–	–	–	–	–	–
Amount of vacation pay[2]										
After 6 months of service:										
Under 1 week	20	33	18	5	17	19	2	–	5	–
1 week	12	1	31	9	28	2	71	20	11	17
Over 1 and under 2 weeks	9	6	1	14	3	–	–	17	–	–
2 weeks	1	1	–	–	–	–	–	–	–	9
Over 2 and under 3 weeks	–	–	2	–	–	–	–	–	–	–
After 1 year of service:										
Under 1 week	–	–	3	–	–	–	–	–	–	–
1 week	67	79	54	64	56	93	20	57	82	16
Over 1 and under 2 weeks	10	2	9	10	10	5	2	–	–	6
2 weeks	13	11	31	12	34	2	78	26	18	78
Over 2 and under 3 weeks	4	(3)	3	5	–	–	–	10	–	–
3 weeks	–	–	(3)	–	–	–	–	6	–	–
Over 3 and under 4 weeks	6	6	–	1	–	–	–	–	–	–
4 weeks	–	1	–	–	–	–	–	–	–	–
After 2 years of service:										
Under 1 week	–	–	1	–	–	–	–	–	–	–
1 week	27	12	13	9	9	46	4	12	26	4
Over 1 and under 2 weeks	6	38	8	18	9	1	2	7	–	3
2 weeks	50	43	69	58	80	48	94	65	74	87
Over 2 and under 3 weeks	12	(3)	6	–	1	5	–	10	–	6
3 weeks	–	–	4	–	–	–	–	6	–	–
Over 3 and under 4 weeks	6	6	–	7	–	–	–	–	–	–
4 weeks	–	1	–	–	–	–	–	–	–	–
After 3 years of service:										
1 week	5	1	7	(3)	–	–	1	3	–	–
Over 1 and under 2 weeks	3	23	9	13	7	–	–	(3)	–	–
2 weeks	72	63	47	52	92	95	97	81	100	94
Over 2 and under 3 weeks	12	6	31	27	1	5	2	10	–	6
3 weeks	2	–	5	1	–	–	–	6	–	–
Over 3 and under 4 weeks	6	6	–	7	–	–	–	–	–	–
4 weeks	–	1	–	–	–	–	–	–	–	–

See footnotes at end of table.

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Table 38. Paid vacations—Continued

(Percent of production workers in machinery manufacturing establishments with formal provisions for paid vacations after selected periods of service, 23 metropolitan areas,[1] November 1983)

Vacation policy	North Central						West			
	Chicago	Cleveland	Detroit	Milwaukee	Minneapolis-St. Paul	St. Louis	Denver-Boulder	Los Angeles-Long Beach	Portland	San Francisco-Oakland
Amount of vacation pay[2]—Continued										
After 4 years of service:										
1 week	5	1	6	(*)	-	-	1	2	-	-
Over 1 and under 2 weeks	3	23	10	8	-	-	-	(*)	-	-
2 weeks	70	59	44	49	97	95	97	81	100	91
Over 2 and under 3 weeks	13	9	32	34	3	5	2	10	-	9
3 weeks	3	1	8	1	-	-	-	6	-	-
Over 3 and under 4 weeks	6	6	-	7	-	-	-	-	-	-
4 weeks	-	1	-	-	-	-	-	-	-	-
After 5 years of service:										
1 week	4	(*)	1	-	-	-	1	2	-	-
Over 1 and under 2 weeks	3	15	3	7	-	-	-	(*)	-	-
2 weeks	58	46	24	33	48	82	18	41	88	32
Over 2 and under 3 weeks	13	24	24	35	10	11	4	30	5	9
3 weeks	16	7	42	10	42	7	78	27	7	59
Over 3 and under 4 weeks	6	6	6	15	-	-	-	-	-	-
4 weeks	-	1	-	-	-	-	-	-	-	-
Over 4 and under 5 weeks	-	(*)	-	-	-	-	-	-	-	-
After 8 years of service:										
1 week	-	(*)	1	-	-	-	-	2	-	-
Over 1 and under 2 weeks	2	-	2	-	-	-	-	-	-	-
2 weeks	37	16	16	5	11	33	6	29	50	-
Over 2 and under 3 weeks	4	49	22	24	17	6	5	29	-	3
3 weeks	41	23	50	48	71	61	88	40	50	82
Over 3 and under 4 weeks	16	10	8	23	-	-	1	-	-	15
4 weeks	-	1	1	-	-	-	-	-	-	-
Over 4 and under 5 weeks	-	(*)	-	-	-	-	-	-	-	-
After 10 years of service:										
1 week	-	-	1	-	-	-	-	2	-	-
Over 1 and under 2 weeks	2	-	1	-	-	-	-	-	-	-
2 weeks	6	3	7	-	2	6	3	5	16	-
Over 2 and under 3 weeks	1	24	8	7	5	-	-	10	-	3
3 weeks	67	50	40	60	85	89	26	68	84	49
Over 3 and under 4 weeks	11	14	30	22	7	-	2	1	-	6
4 weeks	6	2	12	4	1	5	69	8	-	42
Over 4 and under 5 weeks	6	6	1	7	-	-	-	6	-	-
5 weeks	-	(*)	-	-	-	-	-	-	-	-

See footnotes at end of table.

Table 38. Paid vacations—Continued

(Percent of production workers in machinery manufacturing establishments with formal provisions for paid vacations after selected periods of service, 23 metropolitan areas,[1] November 1983)

Vacation policy	North Central						West			
	Chicago	Cleveland	Detroit	Milwaukee	Minneapolis-St. Paul	St. Louis	Denver-Boulder	Los Angeles-Long Beach	Portland	San Francisco-Oakland
Amount of vacation pay[2]—Continued										
After 12 years of service:										
1 week	-	-	1	-	-	-	-	2	-	-
Over 1 and under 2 weeks	2	-	1	-	-	-	-	-	-	-
2 weeks	6	(*)	7	-	2	1	3	5	-	-
Over 2 and under 3 weeks	1	5	8	1	-	-	-	9	-	3
3 weeks	63	46	39	44	85	94	24	60	93	49
Over 3 and under 4 weeks	10	34	31	27	10	-	4	3	7	3
4 weeks	8	8	12	13	3	5	68	14	-	44
Over 4 and under 5 weeks	11	6	1	15	-	-	1	6	-	-
5 weeks	-	(*)	-	-	-	-	-	-	-	-
After 15 years of service:										
1 week	-	-	1	-	-	-	-	2	-	-
Over 1 and under 2 weeks	2	-	1	-	-	-	-	-	-	-
2 weeks	(*)	(*)	6	-	2	1	3	2	-	-
Over 2 and under 3 weeks	1	-	6	(*)	-	-	-	9	-	-
3 weeks	46	15	18	7	26	60	14	50	86	22
Over 3 and under 4 weeks	1	27	19	16	1	9	-	(*)	5	6
4 weeks	34	52	49	57	64	30	49	27	9	72
Over 4 and under 5 weeks	15	6	-	19	-	-	2	7	-	-
5 weeks	2	(*)	(*)	-	-	-	32	1	-	-
Over 5 and under 6 weeks	-	-	1	-	7	-	-	-	-	-
Over 6 and under 7 weeks	-	(*)	-	-	-	-	-	-	-	-
After 20 years of service:										
1 week	-	-	1	-	-	-	-	2	-	-
Over 1 and under 2 weeks	2	-	1	-	-	-	-	-	-	-
2 weeks	(*)	(*)	6	-	2	1	3	2	-	-
Over 2 and under 3 weeks	1	-	6	(*)	-	-	-	9	-	-
3 weeks	19	7	13	3	3	4	9	22	16	4
Over 3 and under 4 weeks	-	8	4	-	-	-	-	(*)	-	6
4 weeks	57	59	38	35	85	88	54	46	77	89
Over 4 and under 5 weeks	4	14	4	22	-	5	2	8	7	-
5 weeks	6	6	27	20	3	1	32	4	-	-
Over 5 and under 6 weeks	11	6	-	19	7	-	-	-	-	-
6 weeks	-	-	-	-	-	-	-	7	-	-
Over 6 and under 7 weeks	-	-	1	-	-	-	-	-	-	-
Over 7 weeks	-	(*)	-	-	-	-	-	-	-	-

See footnotes at end of table.

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Table 38. Paid vacations—Continued

(Percent of production workers in machinery manufacturing establishments with formal provisions for paid vacations after selected periods of service, 23 metropolitan areas,[1] November 1983)

Vacation policy	North Central						West			
	Chicago	Cleveland	Detroit	Milwaukee	Minneapolis–St. Paul	St. Louis	Denver–Boulder	Los Angeles–Long Beach	Portland	San Francisco–Oakland
Amount of vacation pay[2]—Continued										
After 25 years of service:										
1 week	–	–	1	–	–	–	–	2	–	–
Over 1 and under 2 weeks	2	–	1	–	–	–	–	–	–	–
2 weeks	(3)	(3)	6	–	2	1	3	2	–	–
Over 2 and under 3 weeks	1	–	6	(3)	–	–	–	9	–	–
3 weeks	19	5	12	3	3	4	9	22	16	4
Over 3 and under 4 weeks	–	8	4	–	–	–	–	–	–	6
4 weeks	30	28	33	7	23	44	54	37	77	64
Over 4 and under 5 weeks	2	9	4	–	–	–	–	7	–	–
5 weeks	32	42	32	41	64	46	32	12	7	26
Over 5 and under 6 weeks	7	8	–	28	7	5	2	1	–	–
6 weeks	–	–	–	21	–	–	–	9	–	–
Over 6 and under 7 weeks	7	–	–	–	–	–	–	–	–	–
Over 7 weeks	–	(3)	1	–	–	–	–	–	–	–
After 30 years of service:										
1 week	–	–	1	–	–	–	–	2	–	–
Over 1 and under 2 weeks	2	–	1	–	–	–	–	–	–	–
2 weeks	(3)	(3)	6	–	2	1	3	2	–	–
Over 2 and under 3 weeks	1	–	6	(3)	–	–	–	9	–	–
3 weeks	19	5	12	3	3	4	9	22	16	4
Over 3 and under 4 weeks	–	8	4	–	–	–	–	–	–	6
4 weeks	30	28	28	7	23	40	54	29	77	64
Over 4 and under 5 weeks	2	9	4	–	–	–	–	7	–	–
5 weeks	30	40	34	9	53	50	32	19	7	26
Over 5 and under 6 weeks	7	6	–	26	7	–	2	1	–	–
6 weeks	2	2	3	49	11	5	–	9	–	–
Over 6 and under 7 weeks	7	2	–	5	–	–	–	–	–	–
Over 7 weeks	–	(3)	1	–	–	–	–	–	–	–
Maximum vacation:										
1 week	–	–	1	–	–	–	–	2	–	–
Over 1 and under 2 weeks	2	–	1	–	–	–	–	–	–	–
2 weeks	(3)	(3)	6	–	2	1	3	2	–	–
Over 2 and under 3 weeks	1	–	6	(3)	–	–	–	9	–	–
3 weeks	19	5	12	3	3	4	9	22	16	4
Over 3 and under 4 weeks	–	8	4	–	–	–	–	–	–	6
4 weeks	30	28	28	7	23	40	54	29	77	64
Over 4 and under 5 weeks	2	9	4	–	–	–	–	7	–	–
5 weeks	26	40	34	6	53	50	32	19	7	26
Over 5 and under 6 weeks	7	6	–	26	7	–	2	1	–	–
6 weeks	5	2	3	34	11	5	–	9	–	–
Over 6 and under 7 weeks	7	(3)	–	5	–	–	–	–	–	–
7 weeks	–	–	–	18	–	–	–	–	–	–
Over 7 weeks	–	1	1	–	–	–	–	–	–	–

[1] For definitions of areas, see individual area tables 2-32.

[2] Vacation payments, such as percent of annual earnings, were converted to an equivalent time basis. Periods of service were chosen arbitrarily and do not necessarily reflect individual establishment provisions for progression. For example, changes indicated at 20 years may include changes that occurred between 15 and 20 years.

[3] Less than 0.5 percent.

NOTE: Because of rounding, sums of individual items may not equal totals. Dashes indicate no data.

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Table 39. Health, insurance, and retirement plans

(Percent of production workers in machinery manufacturing establishments with specified health, insurance, and retirement plans,[1] 23 metropolitan areas,[2] November 1983)

Type of plan	Northeast								South				
	Boston	Buffalo	Hartford-New Britain-Bristol	Newark	New York	Philadelphia	Pittsburgh	Worcester	Atlanta	Baltimore	Dallas-Fort Worth	Houston	Tulsa
All workers	100	100	100	100	100	100	100	100	100	100	100	100	100
Workers in establishments providing:													
Life insurance	100	96	100	99	99	97	99	93	97	100	93	98	100
Noncontributory plans	94	96	96	99	97	97	93	91	93	75	58	77	79
Accidental death and dismemberment insurance	89	88	96	88	74	83	75	83	95	100	85	74	81
Noncontributory plans	82	88	92	88	62	83	69	82	91	75	50	52	60
Sickness and accident insurance or sick leave or both[3]	99	89	99	71	92	92	97	99	76	99	79	68	82
Sickness and accident insurance	89	82	98	51	50	81	97	92	65	99	60	58	70
Noncontributory plans	87	78	91	31	35	78	90	90	63	90	47	42	61
Sick leave (full pay, no waiting period)	84	32	23	50	91	31	22	77	17	47	34	24	42
Sick leave (partial pay or waiting period)	2	–	–	1	–	–	–	–	–	–	8	1	14
Long-term disability insurance	60	6	26	18	15	36	19	53	5	40	54	46	9
Noncontributory plans	39	6	26	18	9	27	12	53	5	14	42	25	2
Hospitalization insurance	100	99	100	100	99	99	99	100	100	100	99	98	99
Noncontributory plans	65	99	82	93	95	93	91	69	88	74	51	72	64
Surgical insurance	100	99	100	100	99	99	99	100	100	100	99	98	99
Noncontributory plans	65	99	82	93	95	93	91	69	88	74	51	72	64
Medical insurance	100	98	100	100	99	99	99	100	100	100	99	98	99
Noncontributory plans	65	98	82	93	95	93	91	69	88	74	51	72	64
Major medical insurance	100	98	82	82	91	99	99	100	95	100	99	98	99
Noncontributory plans	60	92	64	75	87	93	91	69	84	74	51	72	64
Dental insurance	86	54	87	80	71	61	84	87	13	84	72	65	79
Noncontributory plans	57	54	68	72	62	56	84	72	8	79	32	49	69
Retirement plans[4]	83	96	90	86	83	85	95	90	73	99	89	88	90
Pensions	83	94	86	86	83	78	92	90	66	99	70	81	86
Noncontributory plans	64	90	85	78	82	77	84	82	66	99	54	76	82
Severance pay	3	2	4	–	–	12	3	42	11	15	23	18	20

See footnotes at end of table.

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Table 39. Health, insurance, and retirement plans—Continued

(Percent of production workers in machinery manufacturing establishments with specified health, insurance, and retirement plans,[1] 23 metropolitan areas,[2] November 1983)

Type of plan	North Central						West			
	Chicago	Cleveland	Detroit	Milwaukee	Minneapolis–St. Paul	St. Louis	Denver–Boulder	Los Angeles–Long Beach	Portland	San Francisco–Oakland
All workers	100	100	100	100	100	100	100	100	100	100
Workers in establishments providing:										
Life insurance	99	98	98	100	99	94	100	93	100	87
Noncontributory plans	88	91	97	74	98	89	91	87	100	87
Accidental death and dismemberment insurance	77	90	95	92	66	88	58	82	100	61
Noncontributory plans	65	81	94	66	66	83	51	79	100	61
Sickness and accident insurance or sick leave or both[3]	87	96	95	99	99	92	96	68	93	73
Sickness and accident insurance	85	95	95	99	83	86	91	21	93	26
Noncontributory plans	71	87	93	72	82	86	84	16	93	26
Sick leave (full pay, no waiting period)	3	6	14	4	60	10	76	54	14	42
Sick leave (partial pay or waiting period)	3	1	–	–	–	10	–	10	–	31
Long-term disability insurance	11	16	34	45	18	17	51	34	12	31
Noncontributory plans	9	15	34	27	13	12	42	29	12	23
Hospitalization insurance	100	99	99	100	100	99	98	87	100	77
Noncontributory plans	80	90	96	69	81	99	85	71	100	74
Surgical insurance	100	99	99	100	100	99	98	87	100	77
Noncontributory plans	80	90	96	69	81	99	85	71	100	74
Medical insurance	100	99	99	100	100	99	98	87	100	77
Noncontributory plans	80	90	96	69	81	99	85	71	100	74
Major medical insurance	100	95	59	96	100	93	98	89	100	77
Noncontributory plans	80	86	55	65	79	93	83	73	100	74
Dental insurance	51	60	83	94	80	65	87	73	100	83
Noncontributory plans	43	56	79	62	66	60	42	60	68	78
Retirement plans[4]	82	82	75	97	91	87	55	58	100	88
Pensions	76	82	75	83	86	87	51	50	100	88
Noncontributory plans	75	82	72	83	66	87	49	41	100	80
Severance pay	10	6	–	13	4	–	4	12	–	–

[1] Includes those plans for which the employer pays at least part of the cost and excludes legally required plans such as workers' compensation and social security; however, plans required by State temporary disability insurance laws are included if the employer contributes more than is legally required or employees receive benefits over legal requirements. "Noncontributory plans" include only those plans financed entirely by the employer.

[2] For definitions of areas, see individual area tables 2-32.

[3] Unduplicated total of workers receiving sickness and accident insurance and sick leave shown separately.

[4] Unduplicated total of workers covered by pension plans and severance pay shown separately.

NOTE: Dashes indicate no data.

Table 40. Selected benefits

(Percent of production workers in machinery manufacturing establishments with formal provisions for selected benefits,[1] 23 metropolitan areas,[2] November 1983)

Benefit	Northeast								South				
	Boston	Buffalo	Hartford–New Britain–Bristol	Newark	New York	Philadelphia	Pittsburgh	Worcester	Atlanta	Baltimore	Dallas–Fort Worth	Houston	Tulsa
Workers in establishments with provisions for:													
Funeral leave	95	89	97	94	70	89	100	100	92	91	94	79	87
Jury-duty leave	92	85	92	89	65	75	97	100	93	88	95	95	96
Technological severance pay	32	24	16	45	37	47	50	39	10	10	38	53	11
Cost-of-living adjustments	25	48	54	18	17	26	50	–	16	29	21	40	37
Based on BLS Consumer Price Index	25	48	54	18	17	26	50	–	16	29	21	40	37
Supplemental unemployment benefits	2	–	25	11	–	16	25	–	2	–	14	1	–

Benefit	North Central						West			
	Chicago	Cleveland	Detroit	Milwaukee	Minneapolis–St. Paul	St. Louis	Denver–Boulder	Los Angeles–Long Beach	Portland	San Francisco–Oakland
Workers in establishments with provisions for:										
Funeral leave	74	91	77	94	99	93	97	66	26	69
Jury-duty leave	77	91	77	94	99	99	98	35	93	83
Technological severance pay	20	30	10	24	19	12	76	20	–	34
Cost-of-living adjustments	35	26	47	54	19	19	–	18	54	62
Based on BLS Consumer Price Index	35	26	47	54	19	19	–	18	54	62
Supplemental unemployment benefits	17	12	46	15	–	–	–	4	–	23

[1] For definition of items, see appendix B.
[2] For definitions of areas, see individual area tables 2-32.

NOTE: Dashes indicate no data.

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Table 41. Selected characteristics

(Percent of production workers in machinery manufacturing establishments by selected characteristics, 23 metropolitan areas,[1] November 1983)

Item[2]	Northeast								South				
	Boston	Buffalo	Hartford-New Britain-Bristol	Newark	New York	Philadelphia	Pittsburgh	Worcester	Atlanta	Baltimore	Dallas-Fort Worth	Houston	Tulsa
All workers	100	100	100	100	100	100	100	100	100	100	100	100	100
Principal type of assembly													
Bench	52	34	39	51	38	59	38	23	26	20	32	25	42
Conveyor line	-	-	17	4	12	-	4	-	37	31	6	-	-
Floor	39	59	26	29	35	33	35	66	32	44	48	56	48
Other	-	-	-	1	5	4	2	1	-	-	8	-	-
No assembly operations	9	6	16	15	10	4	21	10	5	5	6	19	10
Numerically controlled machines													
Have N/C machines	73	73	81	56	48	64	34	75	34	71	55	91	73
Wage policy for N/C and conventional machine operators:													
No formal policy	62	13	48	29	39	34	24	61	8	67	31	73	22
Same rates	2	28	23	9	4	17	9	-	8	4	25	14	16
Higher rates for N/C	9	24	10	16	5	12	-	8	19	-	-	1	15
Lower rates for N/C	-	7	-	2	-	1	-	5	-	-	-	3	20
Other policy	-	-	-	-	-	-	-	-	-	-	-	-	-
Have no N/C machines	27	27	19	44	52	36	66	25	66	29	45	9	27
Plan to purchase	-	1	1	9	1	-	-	1	3	-	(3)	-	-
No plans to purchase	27	27	18	35	52	36	66	24	63	29	44	9	27
Bank operation[4]													
Bank operations	28	49	67	20	8	20	21	50	5	62	34	24	1
Wage differential paid to workers on bank operations	22	43	46	13	4	20	17	26	3	33	30	22	1
No bank operations	72	51	33	80	92	80	79	50	95	38	66	76	99
Formal training programs													
Registered apprenticeship program	-	7	23	16	1	28	14	-	7	50	4	2	-
Formal training program	-	14	3	4	1	4	19	35	3	4	6	11	6
Apprenticeship and formal training programs	17	13	37	19	-	4	9	-	-	-	7	24	-
No training programs	83	66	37	61	98	64	58	65	90	46	83	63	94
Labor-management contract coverage[5]	35-39	80-84	55-59	55-59	65-69	40-44	70-74	15-19	35-39	45-49	35-39	45-49	40-44

See footnotes at end of table

Table 41. Selected characteristics—Continued

(Percent of production workers in machinery manufacturing establishments by selected characteristics, 23 metropolitan areas,[1] November 1983)

Item[2]	North Central						West			
	Chicago	Cleveland	Detroit	Milwaukee	Minneapolis-St. Paul	St. Louis	Denver-Boulder	Los Angeles-Long Beach	Portland	San Francisco-Oakland
All workers	100	100	100	100	100	100	100	100	100	100
Principal type of assembly										
Bench	20	32	23	19	44	45	81	41	24	46
Conveyor line	24	8	22	37	7	7	3	4	–	–
Floor	24	39	29	38	40	27	15	38	71	48
Other	–	–	(3)	–	1	6	–	2	–	–
No assembly operations	32	21	25	6	8	16	1	15	4	7
Numerically controlled machines										
Have N/C machines	75	75	64	85	67	77	88	57	78	52
Wage policy for N/C and conventional machine operators:										
No formal policy	30	8	30	15	46	14	42	18	53	20
Same rates	22	51	24	15	8	55	43	26	13	24
Higher rates for N/C	24	12	10	39	10	8	3	10	5	7
Lower rates for N/C	–	4	–	16	2	–	–	1	7	–
Other policy	–	–	–	–	–	–	–	2	–	–
Have no N/C machines	25	25	36	15	33	23	12	43	22	48
Plan to purchase	3	(3)	6	4	10	–	3	–	9	–
No plans to purchase	22	25	30	11	23	23	9	43	13	48
Bank operation[4]										
Bank operations	54	35	38	44	20	47	14	20	10	9
Wage differential paid to workers on bank operations	49	34	34	31	18	28	14	12	5	9
No bank operations	46	65	62	56	80	53	86	78	90	91
Formal training programs										
Registered apprenticeship program	16	6	16	54	1	16	11	3	37	20
Formal training program	20	18	11	6	1	35	37	6	5	3
Apprenticeship and formal training programs	4	(3)	28	6	–	15	–	8	–	–
No training programs	61	75	45	34	97	34	52	82	57	77
Labor-management contract coverage[5]	45-49	65-69	55-59	65-69	55-59	80-84	10-14	25-29	35-39	70-74

[1] For definitions of areas, see individual area tables 2-32.
[2] For definition of items, see appendix B.
[3] Less than 0.5 percent.
[4] A system which enables one worker to operate two or more production machine tools of the same type simultaneously.
[5] Data relate to the percent of production workers in each area in establishments where labor-management agreements covered a majority of such workers. Estimates are presented in 5-percent bands.

NOTE: Because of rounding, sums of individual items may not equal totals. Dashes indicate no data.

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Appendix A. Wage Indexes, 1945–83

The machinery index series has been developed from data obtained in the Bureau's program of occupational wage surveys since 1945, and is based on the straight-time hourly earnings of production workers in the following occupations: Assemblers (classes A, B, and C); maintenance electricians; inspectors (classes A, B, and C); janitors, porters, and cleaners; material handling laborers; machine-tool operators (classes A, B, and C); production machinists; tool and die makers (other than jobbing); and class A hand welders. Before 1978, data were based on earnings of male production workers only.

Area indexes reflect changes in average hourly earnings but not changes in the proportion of workers in the separate occupations. For each area, an aggregate of earnings was obtained by weighting the average straight-time hourly earnings for the index occupations by the employment in the occupations in that area for 1978. The percent change was determined by comparing this aggregate with the aggregate for the previous survey (1981); the 1983 index was computed by applying the percent change to the previous survey's index (in this case 1981) for the area.

The index for all 21 areas combined is constructed so as to minimize the effect of employment changes among the areas studied. The composite index was obtained by using techniques similar to those used to determine area indexes. An aggregate of earnings was obtained by weighting the average straight-time hourly earnings for the selected occupations in each area by employment in the machinery industries in each area for 1978. The percent change was determined by comparing this ag-

Table A-1. Indexes of average straight-time hourly earnings[1] of production workers[2] in selected occupations in machinery manufacturing, selected metropolitan areas, 1945-83[3]

Period	Selected occupations		Production workers in—										
	Laborers, material handling	Tool and die makers (other than jobbing)	All areas combined[4]	Baltimore	Boston	Buffalo	Chicago	Cleveland	Dallas-Fort Worth[5]	Denver-Boulder	Detroit	Hartford	Houston
1945: January	14.3	17.2	16.4	16.2	16.2	16.7	15.7	16.0	17.9	-	17.4	16.6	16.9
1946: October	17.9	20.1	19.6	19.3	19.0	20.4	19.0	20.9	20.3	-	19.8	19.8	19.0
1947: November	19.3	21.6	21.6	21.2	21.2	20.4	21.1	23.9	21.8	-	21.5	21.7	21.1
1948: November	21.3	23.2	23.4	23.1	23.7	23.0	23.2	24.9	23.3	-	22.5	24.2	23.6
1949: November	22.0	23.6	23.8	23.0	24.8	22.5	23.2	25.2	24.2	-	23.0	23.8	23.7
1951: January	23.6	24.8	25.6	24.5	25.8	24.2	25.4	27.1	25.9	-	24.7	25.7	25.3
1952: January	25.2	26.1	27.0	25.1	26.8	25.8	26.4	28.5	26.7	-	26.3	27.0	26.5
1953: January	27.0	27.6	28.8	27.2	28.4	28.0	28.3	29.9	28.2	-	27.8	29.4	28.0
1954: January	28.3	29.3	30.2	28.4	29.8	(6)	29.6	31.4	29.9	(6)	29.3	30.7	29.3
1955: January	29.3	30.2	31.1	30.7	30.8	29.7	30.7	32.2	25.6	31.0	30.1	31.6	30.4
1956: January	30.4	31.6	32.6	32.4	31.7	31.5	31.9	33.9	31.2	32.5	31.7	33.1	32.0
1958: January	34.3	34.8	35.9	35.9	34.8	35.0	34.8	37.1	34.2	38.0	35.4	36.8	35.8
1959: January	35.9	36.2	37.1	38.0	36.4	36.0	36.1	37.9	35.4	38.8	36.1	38.0	36.0
1960: January	37.1	37.6	38.6	39.1	38.2	37.3	37.7	40.5	36.5	40.3	37.6	39.7	38.7
1961: March-May	38.6	38.9	39.8	40.8	39.9	38.8	38.2	41.4	37.6	41.6	38.7	41.6	38.6
1962: March-June	39.5	40.0	40.9	41.6	41.1	39.5	39.4	42.9	38.6	42.0	39.5	42.6	39.4
1963: March-May	40.7	40.9	42.1	43.6	42.3	40.8	40.7	44.1	39.6	43.1	40.4	44.0	40.2
1964: March-May	42.0	42.3	43.2	44.9	42.9	42.1	42.1	45.2	41.2	44.2	41.2	45.7	40.7
1965: April-June	42.8	43.4	44.2	46.1	43.7	43.5	43.0	46.4	42.4	45.5	42.3	46.7	41.6
1966: June-July	44.2	45.4	45.9	47.7	45.8	44.5	44.2	48.1	44.3	47.0	43.7	48.4	44.1
1968: September-November	50.1	53.0	52.2	53.6	52.4	50.7	50.9	53.5	50.9	55.1	50.9	55.5	49.4
1970: December	58.4	59.6	59.0	58.9	60.4	57.5	59.5	59.5	59.1	65.1	58.0	62.0	55.6
1973: February	67.7	67.4	66.8	67.6	68.1	66.2	66.7	68.2	65.2	71.7	65.4	68.5	64.1
1974: December	77.8	79.0	78.1	79.1	76.2	76.6	76.6	79.5	76.1	81.9	76.8	79.9	76.5
1978: January	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1981: January	132.5	136.0	133.5	132.3	134.6	131.3	126.3	135.7	136.4	129.8	136.3	134.1	137.3
1983: November	156.4	158.1	153.3	157.2	158.3	149.1	149.4	146.4	170.0	152.7	158.5	155.3	159.2

See footnotes at end of table.

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Table A-1. Indexes of average straight-time hourly earnings[1] of production workers[2] in selected occupations in machinery manufacturing, selected metropolitan areas, 1945-83[3]—Continued

Period	Production workers in—										
	Los Angeles-Long Beach[4]	Milwaukee	Minneapolis-St. Paul	New York[4]	Newark[5]	Philadelphia	Pittsburgh	Portland	St. Louis	San Francisco-Oakland	Worcester
1945: January	19.1	14.4	15.3	19.6	18.3	16.7	15.7	-	14.6	16.3	-
1946: October	22.1	18.4	18.1	23.4	21.5	20.3	19.5	-	17.2	18.6	-
1947: November	23.7	20.1	19.8	25.8	22.9	21.6	20.9	-	20.4	20.2	-
1948: November	25.2	21.8	21.6	27.7	25.5	23.8	23.6	-	21.9	21.7	-
1949: November	25.5	21.8	22.6	29.7	26.2	24.8	23.5	-	22.3	21.8	-
1951: January	27.4	23.5	23.7	31.7	27.4	26.2	26.5	-	23.5	22.6	-
1952: January	28.7	25.6	25.1	32.2	29.3	27.6	26.9	-	25.0	24.7	-
1953: January	30.9	27.4	27.1	34.1	31.1	30.2	28.7	-	26.6	25.5	-
1954: January	32.0	28.5	28.4	35.8	32.0	31.8	30.9	(6)	29.2	27.3	(6)
1955: January	33.3	29.3	29.3	37.2	33.0	32.8	31.5	27.6	30.4	28.1	31.6
1956: January	34.9	30.8	30.5	38.3	34.6	34.1	34.2	28.5	32.1	28.4	33.7
1958: January	38.7	34.3	33.3	41.7	37.6	36.5	38.2	31.7	35.2	33.6	36.6
1959: January	39.6	35.4	34.2	42.3	39.2	38.3	40.3	32.7	36.4	36.5	37.9
1960: January	41.2	36.7	35.5	43.5	39.8	39.9	41.4	35.7	37.8	37.4	38.6
1961: March-May	42.5	38.0	37.5	45.2	41.4	41.2	42.6	36.4	39.4	38.5	40.6
1962: March-June	43.8	39.2	38.3	46.9	42.7	42.2	43.3	37.7	41.4	39.5	41.7
1963: March-May	45.2	40.2	39.2	48.3	43.8	42.7	43.6	38.8	42.9	40.8	43.2
1964: March-May	45.6	41.1	40.8	49.8	45.8	43.7	44.1	40.0	43.7	41.9	44.1
1965: April-June	47.4	41.7	41.8	50.6	46.6	44.8	44.8	41.6	45.1	44.2	45.5
1966: June-July	49.7	43.8	44.0	53.0	48.2	45.9	47.0	42.6	46.8	46.1	47.8
1968: September-November	55.6	49.2	50.4	57.5	55.4	51.5	50.7	49.6	55.3	52.5	53.4
1970: December	61.1	56.7	57.9	64.9	62.6	60.1	55.3	55.4	61.8	60.5	60.9
1973: February	68.4	65.3	66.1	74.3	69.8	68.5	66.0	63.3	69.5	71.1	68.4
1974: December	80.1	75.3	76.5	84.9	81.0	79.6	79.2	76.6	80.1	86.7	77.3
1978: January	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1981: January	133.8	132.5	142.0	133.0	133.9	130.1	130.0	129.1	129.9	140.9	129.0
1983: November	162.1	151.1	156.0	153.7	141.7	143.6	144.7	144.4	146.2	162.6	153.7

[1] Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.

[2] Data for 1978 were adjusted to reflect changes in the earnings of men and women production workers from 1974 to 1978. Data for 1974 and earlier years relate to earnings of men only.

[3] Data for the periods shown as January 1951-60, December 1970, and December 1974 cover various months, generally winter of the year.

[4] The all-area average for the years 1945 through 1953 was made up of the areas shown and Providence, Syracuse, Atlanta, Chattanooga, Tulsa, Cincinnati, Indianapolis, and Seattle-Tacoma.

[5] Data for 1973 and earlier years relate only to the Dallas SMSA.

[6] Data did not meet publication criteria.

[7] Data for 1954 and earlier years were not sufficiently comparable with information from subsequent years to show here but were included in the total for all areas studied.

[8] Data for 1974 and earlier years also include the following SMSA's: Anaheim-Santa Ana-Garden Grove (combined with Los Angeles-Long Beach); Jersey City (combined with Newark); and Nassau-Suffolk (combined with New York).

gregate with the aggregate for the previous survey, and the current (1983) index was computed by applying the percent change to the previous (1981) index for all areas combined.

From time to time, the index procedure is revised to update the occupational and area weights. New indexes are linked to existing ones to form a continuous series. Reweighting was last carried out in the 1978 survey.

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Appendix B. Scope and Method of Survey

Scope of survey

The survey included establishments engaged primarily in manufacturing nonelectrical machinery (major industry group 35 as defined in the 1972 edition of the *Standard Industrial Classification Manual* prepared by the U.S. Office of Management and Budget). This major group includes establishments engaged in manufacturing machinery and equipment, except for electrical equipment (which is included in major group 36) and transportation equipment (major group 37). Machines powered by built-in or detachable motors ordinarily are included in major group 35, with the exception of electrical household appliances (major group 36). Portable tools, both electric and pneumatic, are included in major group 35, but handtools are classified in major group 34. Separate auxiliary units such as central offices were excluded.

Establishments studied were selected from those employing 50 workers or more at the time of reference of the data used in compiling the universe lists. Also included were establishments which employed 8 to 49 workers and primarily manufactured special dies and tools, die sets, jigs and fixtures, or machine-tool accessories and measuring devices (industries 3544 and 3545). Table B-1 shows the number of establishments and workers estimated to be within the scope of the survey, as well as the number actually studied by the Bureau.

Method of study

Data were obtained by personal visits of the Bureau's field representatives to a probability-based sample of establishments within the scope of the survey. To obtain appropriate accuracy at minimum cost, a greater proportion of large than of small establishments was studied. In combining the data, each establishment was given an appropriate weight. All estimates are presented, therefore, as relating to all establishments in the industry, excluding only those below the minimum size at the time of reference of the universe data.

Establishment definition

An establishment is defined for this study as a single physical location where manufacturing operations are performed. An establishment is not necessarily identical with a company, which may consist of one establishment or more. In this bulletin, the terms "plant" and "establishment" have been used interchangeably.

Employment

Estimates of the number of workers within the scope of the study are intended as a general guide to the size and composition of the industry's labor force, rather than as precise measures of employment.

Production workers

The terms "production workers" and "production and related workers," used interchangeably in this bulletin, include working supervisors and all nonsupervisory workers engaged in nonoffice activities. Administrative, executive, office, professional, and technical personnel, and force-account construction employees, who are used as a separate work force on the firm's own properties, are excluded.

Occupational classification

Occupational classification was based on a uniform set of job descriptions designed to take account of interestablishment and interarea variations in duties within the same job. (See appendix C for these descriptions.) The criteria for selection of the occupations were: The number of workers in the occupation; the usefulness of the data in collective bargaining; and appropriate representation of the entire job scale in the industry. Working supervisors, apprentices, learners, beginners, trainees, and handicapped, part-time, temporary, and probationary workers were not reported in the data for selected occupations.

Wage data

Information on wages relates to straight-time hourly earnings, excluding premium pay for overtime and for work on weekends, holidays, and late shifts. Also excluded are performance bonuses and lump-sum payments of the type negotiated in the auto and aerospace industries, as well as profit-sharing payments, attendance bonuses, Christmas or year-end bonuses, and other nonproduction bonuses. Incentive payments, such as those resulting from piecework or production bonus systems, and cost-of-living bonuses were included as part of the workers' regular pay.

Average (mean) hourly rates or earnings for each occupation were calculated by weighting each rate (or hourly earnings) by the number of workers receiving the rate, totaling, and dividing by the number of individuals. The hourly earnings of salaried workers, if any, were obtained by dividing straight-time salary by

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Table B-1. Estimated number of establishments and employees within scope of study and number studied, machinery manufacturing, November 1983

Region and area[1]	Number of establishments[2]		Workers in establishments		
	Actually studied	Within scope of study	Within scope of study		Total actually studied[3]
			Total[4]	Production workers	
Total, 23 areas	830	3,725	457,226	252,927	265,821
Northeast					
Boston	28	107	27,217	14,641	19,781
Buffalo	22	69	7,926	4,175	4,971
Hartford–New Britain–Bristol	45	129	13,718	8,490	9,207
Newark	51	152	12,984	7,948	8,734
New York	36	145	11,222	7,473	4,594
Philadelphia	37	249	28,821	15,546	11,428
Pittsburgh	25	97	10,217	5,065	6,432
Worcester	14	32	4,663	2,474	3,083
South					
Atlanta	23	47	4,283	2,827	3,305
Baltimore	16	37	5,991	4,014	3,973
Dallas–Fort Worth	37	140	23,376	14,832	13,826
Houston	40	172	24,396	13,470	15,079
Tulsa	27	51	7,837	3,940	5,768
North Central					
Chicago	60	517	49,770	33,641	20,837
Cleveland	60	207	19,137	11,319	9,861
Detroit	100	631	34,696	20,732	17,937
Milwaukee	36	178	29,048	16,336	15,305
Minneapolis–St. Paul	31	175	53,151	19,721	39,768
St. Louis	31	118	13,872	8,926	8,832
West					
Denver–Boulder	16	44	16,850	6,717	15,154
Los Angeles–Long Beach	65	326	48,240	25,407	21,512
Portland	12	35	3,542	1,730	2,130
San Francisco–Oakland	18	67	6,269	3,503	4,304

[1] See individual area tables 2-32 for definitions of the selected areas.
[2] Includes only those establishments in industries 3544 and 3545 with 8 workers or more and establishments with 50 workers or more in all other industries at the time of reference of the universe data.
[3] Data relate to total employment in establishments actually visited.
[4] Includes executive, professional managerial, office, and other workers in addition to the production category shown separately.

normal (or standard) hours to which the salary corresponds.

Method of wage payment

Tabulations by method of wage payment relate to the number of workers paid under the various time and incentive wage systems. Formal rate structures for time-rated workers provide single rates or a range of rates for individual job categories. In the absence of a formal rate structure, pay rates are determined primarily by the qualifications of the individual worker. A single-rate structure is one in which the same rate is paid to all experienced workers in the same job classification. Learners, apprentices, or probationary workers may be paid according to rate schedules which start below the single rate and permit the workers to achieve the full job rate over a period of time. An experienced worker occasionally may be paid above or below the single rate for special reasons, but such payments are exceptions. Range-of-rate plans are those in which the minimum, maximum, or both of these rates, paid experienced workers for the same job are specified. Specific rates of individual workers within the range may be determined by merit, length of service, or a combination of these. Incentive workers are classified under piecework or bonus plans. Piecework is work for which a predetermined rate is paid for each unit of output. Production bonuses are for production in excess of a quota or for completion of a task in less than standard time.

Scheduled weekly hours

Data on weekly hours refer to the predominant work schedule for full-time production workers employed on the day shift.

Shift-differential provisions and practices

Shift provisions relate to the policies of establishments either currently operating late shifts or having formal provisions covering late-shift work. Practices relate to workers employed on late shifts at the time of the survey.

Establishment practices and employee benefits

Employee benefits in an establishment were considered applicable to all production workers if they applied to half or more of such workers in the establish-

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ment. Similarly, if fewer than half of the workers were covered, the benefit was considered nonexistent in the establishment. Because of length-of-service and other eligibility requirements, the proportion of workers receiving the benefits may be smaller than estimated.

Paid holidays. Paid-holiday provisions relate to full-day and half-day holidays provided annually.

Paid vacations. The summary of vacation plans is limited to formal arrangements and excludes informal plans whereby time off with pay is granted at the discretion of the employer or supervisor. Payments not on a time basis were converted; for example, a payment of 2 percent of annual earnings was considered the equivalent of 1 week's pay. The periods of service for which data are presented represent the most common practices, but they do not necessarily reflect individual establishment provisions for progression. For example, changes in proportions indicated at 10 years of service may include changes which occurred between 5 and 10 years.

Health, insurance, and retirement plans. Data are presented for health, insurance, pension, and retirement severance plans for which the employer pays all or a part of the cost, excluding programs required by law such as workers' compensation and social security. Among plans included are those underwritten by a commercial insurance company and those paid directly by the employer from current operating funds or from a fund set aside for this purpose.

Death benefits are included as a form of life insurance. Sickness and accident insurance is limited to that type of insurance under which predetermined cash payments are made directly to the insured on a weekly or monthly basis during illness or accident disability. Information is presented for all such plans to which the employer contributes at least a part of the cost. However, in New York and New Jersey, where temporary disability insurance laws require employer contributions,[1] plans are included only if the employer (1) contributes more than is legally required, or (2) provides the employees with benefits which exceed the requirements of the law.

Tabulations of paid sick leave plans are limited to formal plans which provide full pay or a proportion of the worker's pay during absence from work because of illness; informal arrangements have been omitted. Separate tabulations are provided for (1) plans which provide full pay and no waiting period, and (2) plans providing either partial pay or a waiting period.

Long-term disability insurance plans provide payments to totally disabled employees upon the expiration of sick leave, sickness and accident insurance, or both, or after a specified period of disability (typically 6 months). Payments are made until the end of disability, a maximum age, or eligibility for retirement benefits. Payments may be full or partial, but are almost always reduced by social security, workers' compensation, and private pension benefits payable to the disabled employee.

Medical insurance refers to plans providing for complete or partial payment of doctors' fees. Such plans may be underwritten by a commercial insurance company or a nonprofit organization, or they may be a form of self-insurance.

Major medical insurance, sometimes referred to as extended medical or catastrophe insurance, includes plans designed to cover employees for sickness or injury involving an expense which exceeds the normal coverage of hospitalization, medical, and surgical plans.

Dental insurance, for purposes of this survey, covers routine dental work, such as fillings, extractions, and X-rays. Excluded are plans which cover only oral surgery or accidental injury.

Tabulations of retirement pensions are limited to plans which provide regular payments for the remainder of the retiree's life. Data are presented separately for retirement severance pay (one payment or several over a specified period of time) made to employees upon retirement. Establishments providing both retirement severance payments and retirement pensions to employees were considered as having both retirement pensions and retirement severance plans; however, establishments having optional plans providing employees a choice of either retirement severance payments or pensions were considered as having only retirement pension benefits.

Paid funeral and jury-duty leave. Data for paid funeral and jury-duty leave relate to formal plans which provide at least partial payment for time lost as a result of attending funerals of specified family members or serving as a juror.

Cost-of-living adjustments. Data relate to formal plans whereby wage rates are adjusted periodically in keeping with changes in the Consumer Price Index or some other measure.

Technological severance pay. Data relate to formal plans providing for payments to employees permanently separated from the company because of a technological change or plant closing.

Supplemental unemployment benefit plans. Data relate to formal plans designed to supplement benefits paid under State unemployment insurance systems.

[1] The temporary disability laws in California and Rhode Island do not require employer contributions.

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Appendix C. Occupational Descriptions

The primary purpose of preparing job descriptions for the Bureau's wage surveys is to assist its field representatives in classifying into appropriate occupations workers who are employed under a variety of payroll titles and different work arrangements from establishment to establishment and from area to area. This permits the grouping of occupational wage rates representing comparable job content. Because of this emphasis on comparability of occupational content, the Bureau's job descriptions may differ significantly from those in use in individual establishments or those prepared for other purposes. In applying these job descriptions, the Bureau's field representatives are instructed to exclude working supervisors, apprentices, learners, beginners, trainees, and handicapped, part-time, temporary, and probationary workers.

The titles and code numbers that appear below the job titles in this appendix were taken from the 1980 edition of the *Standard Occupational Classification Manual* (SOC), issued by the U.S. Department of Commerce, Office of Federal Statistical Policy and Standards.

In general, the Bureau of Labor Statistics' occupational descriptions are much more specific than those found in the SOC manual. For example, four of nine machine-tool operator, production, occupations studied fell into one pair of SOC classifications (7312 and 7512). Therefore, in comparing the results of this survey with other sources, differences in occupational definitions should be taken into consideration.

Assembler

(772: Assemblers)

(Bench assembler; floor assembler; jig assembler; line assembler; subassembler)

Assembles and/or fits together parts to form complete units or subassemblies at a bench, conveyor line, or on the floor, depending upon the size of the units and the organization of the production process. Work may include processing operations requiring the use of hand-tools in scraping, chipping, and filing of parts to obtain a desired fit as well as power tools and special equipment when punching, riveting, soldering, or welding of parts is necessary. *Workers who perform any of these processing operations exclusively as part of specialized assembling operations were excluded.*

Class A - Assembles parts into complete units or subassemblies that require fitting of parts and decisions regarding proper performance of any component part or the assembled unit. Work involves any combination of the following: Assembling from drawings, blueprints, or other written specifications; assembling units composed of a variety of parts and/or subassemblies; assembling large units requiring careful fitting and adjusting of parts to obtain specified clearances; using a variety of hand and powered tools and precision measuring instruments.

Class B - Assembles parts into units or subassemblies in accordance with standard and prescribed procedures. Work involves any combination of the following: Assembling a limited range of standard and familiar products composed of a number of small- or medium-sized parts requiring some fitting or adjusting; assembling large units that require little or no fitting of component parts; working under conditions where accurate performance and completion of work within set time limits are essential for subsequent assembling operations; using a limited variety of hand or powered tools.

Class C - Performs short-cycle, repetitive assembling operations. Work does not involve any fitting or making decisions regarding proper performance of the component parts or assembling procedures.

Carpenter, maintenance

(6422: Carpenters)

Performs the carpentry duties necessary to construct and maintain in good repair building woodwork and equipment such as bins, cribs, counters, benches, partitions, doors, floors, stairs, casings, and trim made of wood in an establishment. Work involves most of the following: Planning and laying out of work from blueprints, drawings, models, or verbal instructions; using a variety of carpenter's handtools, portable power tools, and standard measuring instruments; making standard shop computations relating to dimensions of work; selecting materials necessary for the work. In general, the work of the maintenance carpenter requires rounded training and experience usually acquired through a formal apprenticeship or equivalent training and experience.

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Electrician, maintenance

(6432: Electricians)

Performs a variety of electrical trade functions such as the installation, maintenance, or repair of equipment for the generation, distribution, or utilization of electric energy in an establishment. Work involves most of the following: Installing or repairing any of a variety of electrical equipment such as generators, transformers, switchboards, controllers, circuit breakers, motors, heating units, conduit systems, or other transmission equipment; working from blueprints, drawings, layout, or other specifications; locating and diagnosing trouble in the electrical system or equipment; making standard computations relating to load requirements of wiring or electrical equipment; using a variety of electrician's handtools and measuring and testing instruments. In general, the work of the maintenance electrician requires rounded training and experience usually acquired through a formal apprenticeship or equivalent training and experience.

Inspector

(782: Production inspectors, checkers, and examiners)

Inspects parts, products and/or processes of the establishment. Performs such operations as examining parts or products for flaws and defects, checking their dimensions and appearance to determine whether they meet the required standards and specifications. Does not include inspectors in toolrooms or inspectors of purchased parts.

Class A - Responsible for decisions regarding the quality of the product and/or operations. Work involves any combination of the following: Thorough knowledge of the processing operations in the branch of work to which the worker is assigned, including the use of a variety of precision measuring instruments; interpreting drawings and specifications in inspection work on units composed of a large number of component parts; examining a variety of products or processing operations; determining causes of flaws in products and/or processes and suggesting necessary changes to correct work methods; devising inspection procedures for new products.

Class B - Work involves any combination of the following: Thorough knowledge of processing operations in the branch of work to which the worker is assigned, limited to familiar products and processes or where performance is dependent on past experience; performing inspection operations on products and/or processes having rigid specifications, but where the inspection procedures involve a sequence of inspection operations, including decisions regarding proper fit or performance of some parts; using precision measuring instruments.

Class C - Work involves any combination of the following: Short-cycle, repetitive inspection operations; using a standardized, special-purpose measuring instrument repetitively; visual examination of parts of products, rejecting units having obvious deformities or flaws.

Janitor, porter, or cleaner

(5244: Janitors and cleaners)

(Sweeper)

Cleans and keeps in an orderly condition factory working areas and washrooms or premises of an office or other establishment. Duties involve a combination of the following: Sweeping, mopping or scrubbing, and polishing floors; removing chips, trash, and other refuse; dusting equipment, furniture, or fixtures; polishing metal fixtures or trimmings; providing supplies and minor maintenance services; cleaning lavatories, showers, and restrooms. *Workers who specialize in window washing were excluded.*

Laborer, material handling

(8726: Freight, stock, and material movers, not elsewhere classified)

(Loader and unloader; handler and stacker; shelver; trucker; stockman or stock helper; warehouseman or warehouse helper)

A worker employed in a warehouse, manufacturing plant, store, or other establishment whose duties involve one or more of the following: Loading and unloading various materials and merchandise on or from freight cars, trucks, or other transporting devices; unpacking, shelving, or placing materials or merchandise in proper storage location; transporting materials or merchandise by hand truck, car, or wheelbarrow. *Longshore workers who load and unload ships were excluded.*

Machine-tool operator, production

Operates or tends one or more nonportable, power-driven machine tools (including numerically controlled machine tools) in order to shape metal by progressively removing portions of the stock in the form of chips or shavings, or by abrasion, such as:

Automatic lathes	Machine tools, miscellaneous[1]
Boring machines	Milling machines
Drill presses, radial	Planers
Drill presses, single- or multiple-spindle	Screw machines, automatic
	Screw machines, hand
Engine lathes	Shapers
Gear-cutting machines	Turret lathes, automatic
Gear-finishing machines	Turret lathes, hand
Grinding machines	

[1] Includes operators not specifically listed as well as those operating more than one type of machine tool.

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Class A - Sets up machines by determining proper feeds, speeds, tooling, and operation sequence or by selecting those prescribed in drawings, blueprints, or layouts; makes necessary adjustments during operations where changes in work and setup are relatively frequent and where care is essential to achieve requisite dimensions of very close tolerances.

Class B - Sets up machines on standard or roughing operations where feeds, speeds, tooling, and operation sequence are prescribed or maintains operation setup made by others; makes all necessary adjustments during operation where care is essential to achieve very close tolerances or where changes in product are relatively frequent.

Class C - Operates machines on routine and repetitive work; makes only minor adjustments during operation; when trouble occurs, stops machine and calls working supervisor, leadworker, or machine-tool setup worker to correct the operation.

Numerically controlled, set up and operate

Numerically controlled, operate only

Automatic-lathe operator

(7312: Lathe and turning machine setup operators)

(7512: Lathe and turning machine operators and tenders)

(Automatic-between-centers-lathe operator; automatic-chucking-machine operator; automatic turret-lathe operator)

Operates one or more lathes equipped with automatic feed mechanism for actuating the cutting tools over the complete work cycle. Automatic lathes may differ as to type of constructions (horizontal or vertical); number of spindles (single or multiple); method of feed (hand-feed, automatic-chucking, or hopper-feed); method of holding the work (in chucks or between centers); method of presenting the tools to the stock in sequence (turrets, slides, revolving work stations). (For a description of classes of work, see Machine-tool operator, production.)

Drill-press operator, radial

(7318: Drilling and boring machine setup operators)

(7518: Drilling and boring machine operators and tenders)

Operates one or more types of radial-drilling machines designed primarily for the purpose of drilling, reaming, countersinking, counterboring, spot-facing, or tapping holes in large heavy metal parts. Several types of radial drills are in use, the most common type being designed so that the tool head and saddle are movable along a projecting arm which can be rotated about a vertical column and adjusted vertically on that column. (For a description of classes of work, see Machine-tool operator, production.)

Drill-press operator, single- or multiple-spindle

(7318: Drilling and boring machine setup operators)

(7518: Drilling and boring machine operators and tenders)

Operates one or more types of single- or multiple-spindle drill presses to perform such operations as drilling, reaming, countersinking, counterboring, spot-facing, and tapping. Drill-press operators, radial, and operators of portable drilling equipment were excluded. (For a description of classes of work, see Machine-tool operator, production.)

Engine-lathe operator

(7312: Lathe and turning machine setup operators)

(7512: Lathe and turning machine operators and tenders)

Operates an engine lathe for shaping external and internal cylindrical surfaces of metal objects. The engine lathe, basically characterized by a headstock, tailstock, and power-fed tool carriage, is a general-purpose machine tool used primarily for turning. It is also commonly used in performing such operations as facing, boring, drilling, and threading and, equipped with appropriate attachments, may be used for a very wide variety of special machining operations. The stock may be held in position by the lathe "centers" or by various types of chucks and fixtures. Bench-lathe operators, automatic-lathe operators, screw-machine operators, automatic, and turret-lathe operators, hand (including hand screw machine) were excluded. (For a description of classes of work, see Machine-tool operator, production.)

Grinding-machine operator

(7322: Grinding, abrading, buffing, and polishing machine setup operators)

(75522: Grinding, abrading, buffing, and polishing machine operators and tenders)

(Centerless-grinder operator; cylindrical-grinder operator; external-grinder operator; internal-grinder operator; surface-grinder operator; Universal-grinder operator)

Operates one of several types of precision grinding machines to grind internal and external surfaces of metal parts to a smooth and even finish and to required dimensions. Precision grinding is used primarily as a finishing operation on previously machined parts, and consists of applying abrasive wheels rotating at high speed to the surfaces to be ground. In addition to the types of grinding machines indicated above, this classification includes operators of other production grinding machines such as: Single-purpose grinders

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(drill grinders, broach grinders, saw grinders, gear-cutter grinders, thread grinders, etc.) and automatic and semi-automatic general purpose grinding machines. Operators of portable grinders were excluded. (For a description of classes of work, see Machine-tool operator, production.)

Machine-tool operator, miscellaneous

(7329: Miscellaneous metalworking and plastic working machine setup operators)

(7529: Miscellaneous metalworking and plastic working machine operators and tenders)

Includes certain specialist operators, as well as all operators who are required alternately to operate more than one type of nonportable power-driven machine tool that shapes metal by progressively removing portions of the stock in the form of chips or shavings or by abrasion. (For definition of machine tool, see Machine-tool operator, production). For wage study purposes, specialist operators are limited to those on boring machine, gear cutter, gear finisher, planer, shaper, or metal-cutting type machine tools not specifically listed in the general definition of machine-tool operator, production.) (For a description of classes of work, see Machine-tool operator, production.)

Operators of bench lathes and single-purpose millers such as thread millers, duplicators, diesinkers, pantograph millers and engraving millers were excluded.

Milling-machine operator

(7313: Milling and planing machine setup operators)

(7513: Milling and planing machine operators and tenders)

(Milling-machine operator, automatic; milling-machine operator, hand)

Performs a variety of work such as grooving, planing, and shaping metal objects on a milling machine, which removes material from metal surfaces by the cutting action of multitoothed rotating cutters of various sizes and shapes. Milling-machine types vary from the manually controlled machines employed in unit production to fully automatic (conveyor-fed) machines found in plants engaged in mass production. For wage study purposes, operators of single-purpose millers such as thread millers, duplicators, diesinkers, pantograph millers, and engraving millers were excluded. (For a description of classes of work, see Machine-tool operator, production.)

Screw-machine operator, automatic

(7312: Lathe and turning machine setup operators)

(7512: Lathe and turning machine operators and tenders)

Operates one or more multiple- or single-spindle automatic screw machines. Automatic screw machines are production turning machines with automatic-feed cycle designed to produce parts from bar or tube stock fed automatically through spindles or the head stock. These machines, equipped with from one to eight spindles on a turret, automatically perform and repeat a cycle of operations on each length of stock fed into the machine. (For a description of classes of work, see Machine-tool operator, production.)

Turret-lathe operator, hand

(7312: Lathe and turning machine setup operators)

(7512: Lathe and turning machine operators and tenders)

Operates a lathe equipped with a turret used to present a number of cutting tools, required for a cycle of machining operations, to the work in sequence. Operations commonly performed on a turret-lathe include turning, facing, boring, drilling, and threading. The operator rotates or indexes the turret to bring the tools toward the work for each operation. Individual workpieces, such as forgings and castings, are held in a chuck or the lathe may be equipped with a bar stock feeding device to present the correct length of stock to the tools at the beginning of each cycle of operations. (For a description of classes of work, see Machine-tool operator, production.)

Machine-tool operator, toolroom

(7329: Miscellaneous metalworking and plastic working machine setup operators)

(7529: Miscellaneous metalworking and plastic working machine operators and tenders)

Specializes in operating one or more than one type of machine tool (e.g., jig borer, grinding machine, engine lathe, milling machine) to machine metal for use in making or maintaining jigs, fixtures, cutting tools, gauges, or metal dies or molds used in shaping or forming metal or nonmetallic material (e.g., plastic, plaster, rubber, glass). Work typically involves: Planning and performing difficult machining operations which require complicated setups or high degree of accuracy; setting up machine tool or tools (e.g., install cutting tools and adjust guides, stops, working tables, and other controls to handle the size of stock to be machined; determine proper feeds, speeds, tooling, and operation sequence or select those prescribed in drawings, blueprints, or layouts); using a variety of precision measuring instruments; making necessary adjustments during machining operation to achieve requisite dimensions to very close tolerances. May be required to select proper coolants and cutting and lubricating oils, to recognize when tools need dressing, and to dress tools. In general, the work of a machine-tool operator (toolroom) at the skill level called for in this classification requires extensive knowledge of machine-shop and toolroom practice usually acquired through considerable on-the-job training and experience.

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This occupation includes operators employed in the construction of machine shop dies, tools, gauges, jigs, etc., produced for sale as the end product of an establishment, as well as operators engaged in making or maintaining these items for use within the establishment. Thus, most class A machine-tool operators in establishments classified in SIC 3544 were classified as machine-tool operators, toolroom.

Also includes operators of numerically controlled machines if the machining operations are of the "toolroom" level of difficulty.

For wage survey purposes, workers were classified as follows:

Operates only one type of machine tool:
- Drill-press operator, radial
- Engine-lathe operator
- Grinding-machine operator
- Milling-machine operator
- Other (not specified) toolroom machine

Operates more than one type of machine tool[2]

Machinist, maintenance

(6813: Machinists)

Produces replacement parts and new parts in making repairs of metal parts of mechanical equipment operated in an establishment. Work involves most of the following: Interpreting written instructions and specifications; planning and laying out of work; using a variety of machinist's handtools and precision measuring instruments; setting up and operating standard machine tools; shaping of metal parts to close tolerances; making standard shop computations relating to dimensions of work, tooling, feeds and speeds of machining; knowledge of the working properties of the common metals; selecting standard materials, parts, and equipment required for work; fitting and assembling parts into mechanical equipment. In general, the machinist's work normally requires a rounded training in machine shop practice usually acquired through a formal apprenticeship or equivalent training and experience.

Machinist, production

(6813: Machinists)

(All-around machinist; custom machinist)

Fabricates, by a series of progressive machining operations, complete metal parts, mechanisms, or machines, to be used as, or as part of, the end product of the establishment. Work involves most of the following: Interpreting written instructions and specifications; planning and laying out work; using a variety of machinist's handtools and precision measuring instruments; setting up and operating standard machine tools; shaping metal parts to close tolerances; making standard shop computations relating to dimensions of work, tooling, feeds and speeds of machining; knowledge of the working properties of the common metals; selecting standard materials, parts and equipment needed for work; fitting and assembling parts. In general, the machinist's work normally requires a rounded training in machine shop practice usually acquired through a formal apprenticeship or equivalent training and experience.

Mechanic, maintenance

(6178: Millwrights)

Repairs machinery or mechanical equipment of an establishment. Work involves most of the following: Examining machines and mechanical equipment to diagnose source of trouble; dismantling or partly dismantling machines and performing repairs that mainly involve the use of handtools in scraping and fitting parts; replacing broken or defective parts with items obtained from stock; ordering the production of a replacement part by a machine shop or sending the machine to a machine shop for major repairs; preparing written specifications for major repairs or for the production of parts ordered from machine shop; reassembling machines; and making all necessary adjustments for operations. In general, the work of a maintenance mechanic requires rounded training and experience usually acquired through a formal apprenticeship or equivalent training and experience. Excluded from this classification are workers whose primary duties involve setting up or adjusting machines.

Polisher and buffer, metal

(7522: Grinding, abrading, buffing, and polishing machine operators and tenders)

Polishes (or buffs) various metal objects to produce a smooth surface or a high luster. Uses a variety of portable polishers or buffers and/or holds objects against polishing and buffing wheels, straps, belts, and shafts on stationary machines. Work involves most of the following: Attaining a smooth surface and removing flaws and machine marks on a variety of objects involving the maintenance of contours, radii, and uniformity of shape; polishing and/or buffing to close tolerances; selecting proper wheels, shafts, belts, abrasives, and polishing compounds; and setting up the equipment and maintaining wheels. In general, metal polishers and buffers in this classification are required to perform operations which involve a rounded knowledge of the trade, usually acquired through a formal apprenticeship or equivalent training and experience.

Polishing- and buffing-machine operator

(7522: Grinding, abrading, buffing, and polishing machine operators and tenders)

[2] Includes operators of N/C machining centers (multipurpose N/C machine tools).

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Polishes (or buffs) metal objects to produce a smooth surface or high luster by holding objects against rapidly rotating wheels, belts, or straps on a stationary machine set up to achieve a specialized phase of polishing or buffing on a repetitive basis. Work involves one of the following: Setting up and operating machine where wheels and abrasive and polishing compounds are prescribed; polishing or buffing which involves the maintenance of contours, radii, and uniformity of shape on machines set up by others. May select polishing compounds and abrasives on machines set up by others.

Punch-press operator

(7314: Punching and shearing machine setup operators)

(7514: Punching and shearing machine operators and tenders)

Feeds and operates a power press equipped with special production dies that perform one or a combination of cutting and shaping operations on the stock. Individual pieces of stock or partly fabricated units may be positioned in the machine by the operator, or the machine may be equipped with a feeding device that automatically positions single pieces of stock or repetitively positions strip or sheet stock for successive operations.

Punch presses are commonly designated by functional names derived from the operation they perform, such as blanking press or forming press; by names descriptive of the frame, such as arch press; or by names that indicate how the power is transmitted, such as crank press or toggle press.

Class A - Work involves any combination of the following: Difficult positioning of work units because of size or shape or type of operation to be performed, processing unusually large work that is positioned in the press with the aid of other workers; processing work units that must be steadied while operations are being performed; deep drawing or forming operations requiring careful positioning of work and prompt recognition of faulty operation; short-run work requiring ability to perform a variety of punch-press operations or to operate several types of presses; examining output and making adjustments as necessary to maintain production within standards; or setting, aligning, and adjusting dies and fixtures in the press.

Class B - Required mainly to feed, control, and examine operation of the press, and when trouble occurs to call on supervisor, leadperson, or die maker to correct the situation. Work involves one or more of the following: Performing single operations, such as punching, blanking, or piercing on small or medium size stock easily positioned by hand; feeding small units into the press from a feed race or chute; loading and tending a press equipped with a feeding device for handling a strip or sheet stock, or a dial drum, magazine, or hopper feed for handling individual stock blanks.

Setup worker, machine tools

(731-2: Metalworking and plastic working machine setup operators)

Sets up machine tools (including numerically controlled machine tools) for machining operations. Work involves most of the following: Working from drawings, blueprints, job layouts, or other written specifications; determining feeds, speeds, tooling, and operation sequence; installing cutting tools and adjusting guides, stops, working tables, and other controls to handle the size of stock to be machined; operating and adjusting machines until parts produced conform with specifications; and, after turning over machines to regular operators, making necessary adjustments to setups during course of operation to maintain accurate production.

For wage study purposes, setup workers are classified as follows:

Conventional machines
Numerically controlled machines

Tool and die makers

(6811: Tool and die makers)

(Die maker; mold maker; jig maker; toolmaker; fixture maker; gauge maker)

Constructs and repairs jigs, fixtures, cutting tools, gauges, or metal dies or molds used in shaping or forming metal or non-metallic material (*e.g.*, plastic, plaster, rubber, glass). Work typically involves: Planning and laying out work according to models, blueprints, drawings, or other written or oral specifications; understanding the working properties of common metals and alloys; selecting appropriate materials, tools, and processes required to complete tasks; making necessary shop computations; setting up and operating various machine tools and related equipment; using various tool and die maker's handtools and precision measuring instruments; working to very close tolerances; heat-treating metal parts and finished tools and dies to achieve required qualities; fitting and assembling parts to prescribed tolerances and allowances. In general, tool and die maker's work requires rounded training in machine shop and toolroom practice usually acquired through formal apprenticeship or equivalent training and experience. Die sinkers were excluded.

For wage study purposes, tool and die makers were classified as follows:

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Jobbing - Workers making dies and tools, die sets, jigs, and fixtures, etc., as the end product of the establishment.

Other than jobbing - Workers making and/or maintaining dies and tools, die sets, jigs, and fixtures, etc., for use within the establishment.

Tool clerk

(4754: Stock and inventory clerks)

(Store clerk; tool checker; tool crib attendant; tool handler; tool keeper)

Receives, stores, and issues handtools, machine tools, dies, and equipment, such as measuring devices and materials, in industrial establishments. Work consists of most of the following: Keeps records of tools issued; searches for lost or misplaced tools; prepares periodic inventory and requisitions stock as needed; unpacks and stores new equipment; and reports damaged and worn out equipment to superiors. May carry tools or move them on trucks to workers, and may make minor tool repairs.

Welder, hand,

(7714: Welders and cutters)

Fuses (welds) metal objects by means of an oxyacetylene torch or arc welding apparatus in the fabrication of metal shapes and in repairing broken or cracked metal objects. In addition to performing hand welding or brazing operation, the welder may also lay out guidelines or marks on metal parts and may cut metal with cutting torch.

Class A - Performs welding operations requiring most of the following: Planning and laying out of work from drawings, blueprints, or other written specifications; knowledge of welding properties of a variety of metals and alloys, setting up work and determining operation sequence; welding high pressure vessels or other objects involving critical safety and load requirements; working from a variety of positions.

Class B - Performs welding operations on repetitive work: Where no critical safety and load requirements are involved; where the work calls mainly for one-position welding; and where the layout and planning of the work are performed by others.

Welder, machine

(7714: Welders and cutters)

(Butt welder; flash welder; seam welder; spot welder)

Operates one or more types of resistance welding apparatus to weld (bond) together metal objects such as bars, pipes, and plates. Resistance welding is a process wherein an electric current is passed through the parts to be welded at the point of contact, and mechanical pressure is applied forcing the contact surfaces together at the points to be joined. Welding machines are generally designed according to type of weld performed and arrangement of welding surfaces of parts to be joined. Welds may be made on overlapping units in the form of one or more spots (spot welding) or lineally by using a rolling electrode (seam welding). Machine welding of units where the edges are brought together without lapping is referred to as butt welding.

Class A - Work involves most of the following: Working from layout or other specification; knowledge of welding properties of variety of metals and alloys; selecting and setting up work-holding fixtures and electrodes; determination of proper pressures, temperatures, timing, and flow of current; determination of number and spacing of welds; positioning and welding units with or without fixtures; using such handtools as hammers, pliers, files and wrenches.

Class B - Work involves: Performing repetitive welding operations on standard units where current settings and electrodes are prescribed or set by others; using fixtures for positioning work or positioning by hand small parts requiring simple welding operations.

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Industry Wage Survey Bulletins

The most recent reports providing occupational wage data for industries currently included in the Bureau's program of industry wage surveys are listed below. Copies are for sale from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, or from any of its regional offices, and from the regional offices of the Bureau of Labor Statistics shown on the inside back cover. Bulletins that are out of stock are available for reference at leading public, college, or university libraries, or at the Bureau's Washington or regional sales offices.

Manufacturing

Basic Iron and Steel, 1983. BLS Bulletin 2221
Cigarette Manufacturing, 1981. BLS Bulletin 2132
Corrugated and Solid Fiber Boxes, 1981. BLS Bulletin 2138
Drug Manufacturing, 1978. BLS Bulletin 2077
Fabricated Structural Metals, 1979. BLS Bulletin 2094
Grain Mill Products, 1982. BLS Bulletin 2207
Hosiery Manufacturing, 1981. BLS Bulletin 2151
Industrial Chemicals, 1981. BLS Bulletin 2136
Iron and Steel Foundries, 1979. BLS Bulletin 2085
Machinery Manufacturing, 1983. BLS Bulletin 2229
Meat Products, 1979. BLS Bulletin 2082
Men's and Boys' Shirts and Nightwear, 1981. BLS Bulletin 2073
Men's and Boys' Suits and Coats, 1984, BLS Bulletin 2230
Men's and Women's Footwear, 1980. BLS Bulletin 2118
Millwork, 1979. BLS Bulletin 2083
Miscellaneous Plastics Products, 1979. BLS Bulletin 2103
Motor Vehicles and Parts, 1983. BLS Bulletin 2223
Nonferrous Metals, 1981. BLS Bulletin 2167
Petroleum Refining, 1981. BLS Bulletin 2143
Pressed or Blown Glass and Glassware, 1980. BLS Bulletin 2109
Pulp, Paper, and Paperboard Mills, 1982. BLS Bulletin 2180
Semiconductors, 1977. BLS Bulletin 2021
Shipbuilding and Repairing, 1981. BLS Bulletin 2161
Structural Clay Products, 1980. BLS Bulletin 2139
Synthetic Fibers, 1981. BLS Bulletin 2150
Textile Mills and Textile Dyeing and Finishing Plants, 1980. BLS Bulletin 2122
Women's and Misses' Dresses, 1982. BLS Bulletin 2187
Wood Household Furniture, 1979. BLS Bulletin 2087

Nonmanufacturing

Appliance Repair Shops, 1981. BLS Bulletin 2177
Auto Dealer Repair Shops, 1982. BLS Bulletin 2198
Banking, 1980. BLS Bulletin 2099
Bituminous Coal Mining, 1982. BLS Bulletin 2185
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Contract Construction, 1973. BLS Bulletin 1911
Department Stores, 1981. BLS Bulletin 2147
Electric and Gas Utilities, 1982. BLS Bulletin 2218
Hospitals, 1981. BLS Bulletin 2204.
Hotels and Motels, 1983. BLS Bulletin 2227
Life Insurance, 1980. BLS Bulletin 2119
Metal Mining, 1977. BLS Bulletin 2017
Nursing and Personal Care Facilities, 1981. BLS Bulletin 2142
Oil and Gas Extraction, 1982. BLS Bulletin 2193
Savings and Loan Associations, 1980. BLS Bulletin 2106

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